SEQUENCE LISTING

<110> Prayaga, Sudhirdas K
Taupier Jr, Raymond J
Bandaru, Raj

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<151> 1999-10-15

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Lys Leu Lys Lys Thr Glu Met Gln Glu Asn Thr Leu Leu Thr Lys Glu
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Ala Ile Glu Gln Glu Lys Arg Val Lys Phe Pro Lys Ser Leu Glu Asp
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Ser Leu Pro Leu Ser Ser Ser Arg Pro Gln
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Asn Leu Leu Asp Thr Ser Thr Ile His Gly Asp Trp Gly Trp Leu Thr
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Tyr Pro Ala His Gly Trp Asp Ser Ile Asn Glu Val Asp Glu Ser Phe
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Gln Pro Ile His Thr Tyr Gln Val Cys Asn Val Met Ser Pro Asn Gln
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Asn Asn Trp Leu Arg Thr Ser Trp Val Pro Arg Asp Gly Ala Arg Arg
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Val Tyr Ala Glu Ile Lys Phe Thr Leu Arg Asp Cys Asn Ser Met Pro
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Gly Val Leu Gly Thr Cys Lys Glu Thr Phe Asn Leu Tyr Tyr Leu Glu
        115                 120                 125

Ser Asp Arg Asp Leu Gly Ala Ser Thr Gln Glu Ser Gln Phe Leu Lys
    130                 135                 140

Ile Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr Gly Ala Asp Leu Gly
145                 150                 155                 160

Val Arg Arg Leu Lys Leu Asn Thr Glu Val Arg Ser Val Gly Pro Leu
                165                 170                 175

Ser Lys Arg Gly Phe Tyr Leu Ala Phe Gln Asp Ile Gly Ala Cys Leu
            180                 185                 190

Ala Ile Leu Ser Leu Arg Ile Tyr Tyr Lys Lys Cys Pro Ala Met Val
        195                 200                 205

Arg Asn Leu Ala Ala Phe Ser Glu Ala Val Thr Gly Ala Asp Ser Ser
    210                 215                 220

Ser Leu Val Glu Val Arg Gly Gln Cys Val Arg His Ser Glu Glu Arg
225                 230                 235                 240

Asp Thr Pro Lys Met Tyr Cys Ser Ala Glu Gly Glu Trp Leu Val Pro
                245                 250                 255

Ile Gly Lys Cys Val Cys Ser Ala Gly Tyr Glu Glu Arg Arg Asp Ala
            260                 265                 270

Cys Val Ala Cys Glu Leu Gly Phe Tyr Lys Ser Ala Pro Gly Asp Gln
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Leu Cys Ala Arg Cys Pro Pro His Ser His Ser Ala Ala Pro Ala Ala
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Gln Ala Cys His Cys Asp Leu Ser Tyr Tyr Arg Ala Ala Leu Asp Pro
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Ser Ser Val Asn Gly Thr Ser Val Thr Leu Glu Trp Ala Pro Pro Leu
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Asn Leu Leu Ala His Met Asn Tyr Ser Phe Trp Ile Glu Ala Val Asn
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Gly Val Ser Asp Leu Ser Pro Glu Pro Arg Arg Ala Ala Val Val Asn
            420                 425                 430

Ile Thr Thr Asn Gln Ala Ala Pro Ser Gln Val Val Val Ile Arg Gln
        435                 440                 445

Glu Arg Ala Gly Gln Thr Ser Val Ser Leu Leu Trp Gln Glu Pro Glu
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Gln Pro Asn Gly Ile Ile Leu Glu Tyr Glu Ile Lys Tyr Tyr Glu Lys
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Asp Lys Glu Met Gln Ser Tyr Ser Thr Leu Lys Ala Val Thr Thr Arg
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Ala Thr Val Ser Gly Leu Lys Pro Gly Thr Arg Tyr Val Phe Gln Val
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Arg Ala Arg Thr Ser Ala Gly Cys Gly Arg Phe Ser Gln Ala Met Glu
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Val Glu Thr Gly Lys Pro Arg Pro Arg Tyr Asp Thr Arg Thr Ile Val
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Trp Ile Cys Leu Thr Leu Ile Thr Gly Leu Val Val Leu Leu Leu Leu
545                 550                 555                 560

Leu Ile Cys Lys Lys Arg His Cys Gly Tyr Ser Lys Ala Phe Gln Asp
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Ser Asp Glu Glu Lys Met His Tyr Gln Asn Gly Gln Ala Pro Pro Pro
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Val Phe Leu Pro Leu His His Pro Pro Gly Lys Leu Pro Glu Pro Gln
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Phe Tyr Ala Glu Pro His Thr Tyr Glu Glu Pro Gly Arg Ala Gly Arg
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Ser Phe Thr Arg Glu Ile Glu Ala Ser Arg Ile His Ile Glu Lys Ile
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Ile Gly Ser Gly Asp Ser Gly Glu Val Cys Tyr Gly Arg Leu Arg Val
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675 680 685

Gly Gln Phe Asp His Pro Asn Ile Ile Arg Leu Glu Gly Val Val Thr
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755 760 765

Asp Ser Asn Leu Val Cys Lys Val Ser Asp Phe Gly Leu Ser Arg Val
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Leu Glu Asp Asp Pro Asp Ala Ala Tyr Thr Thr Thr Gly Gly Lys Ile
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Ser Ser Val Glu Glu Gly Tyr Arg Leu Pro Ala Pro Met Gly Cys Pro
850 855 860

His Ala Leu His Gln Leu Met Leu Asp Cys Trp His Lys Asp Arg Ala
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Gln Arg Pro Arg Phe Ser Gln Ile Val Ser Val Leu Asp Ala Leu Ile
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Arg Ser Pro Glu Ser Leu Arg Ala Thr Ala Thr Val Ser Arg Cys Pro
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Pro Pro Ala Phe Val Arg Ser Cys Phe Asp Leu Arg Gly Gly Ser Gly
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Gly Gly Gly Gly Leu Thr Val Gly Asp Trp Leu Asp Ser Ile Arg Met
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Gly Arg Tyr Arg Asp His Phe Ala Ala Gly Gly Tyr Ser Ser Leu Gly

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<213> Homo sapiens

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         35                  40                  45

Ile Asp Ser Thr Thr Cys Pro Ser Val Cys Arg Cys Asp Asn Gly Phe
     50                  55                  60

Ile Tyr Cys Asn Asp Arg Gly Leu Thr Ser Ile Pro Ala Asp Ile Pro
 65                  70                  75                  80

Asp Asp Ala Thr Thr Leu Tyr Leu Gln Asn Asn Gln Ile Asn Asn Ala
                 85                  90                  95

Gly Ile Pro Gln Asp Leu Lys Thr Lys Val Asn Val Gln Val Ile Tyr
            100                 105                 110

Leu Tyr Glu Asn Asp Leu Asp Glu Phe Pro Ile Asn Leu Pro Arg Ser
        115                 120                 125

Leu Arg Glu Leu His Leu Gln Asp Asn Asn Val Arg Thr Ile Ala Arg
    130                 135                 140

Asp Ser Leu Ala Arg Ile Pro Leu Leu Glu Lys Leu His Leu Asp Asp
145                 150                 155                 160

Asn Ser Val Ser Thr Val Ser Ile Glu Glu Asp Ala Phe Ala Asp Ser
                165                 170                 175

Lys Gln Leu Lys Leu Leu Phe Leu Ser Arg Asn His Leu Ser Ser Ile
            180                 185                 190

Pro Ser Gly Leu Pro His Thr Leu Glu Glu Leu Arg Leu Asp Asp Asn
        195                 200                 205

Arg Ile Ser Thr Ile Pro Leu His Ala Phe Lys Gly Leu Asn Ser Leu
    210                 215                 220

Arg Arg Leu Val Leu Asp Gly Asn Leu Leu Ala Asn Gln Arg Ile Ala
225                 230                 235                 240

Asp Asp Thr Phe Ser Arg Leu Gln Asn Leu Thr Glu Leu Ser Leu Val
                245                 250                 255

Arg Asn Ser Leu Ala Ala Pro Pro Leu Asn Leu Pro Ser Ala His Leu
            260                 265                 270

Gln Lys Leu Tyr Leu Gln Asp Asn Ala Ile Ser His Ile Pro Tyr Asn
        275                 280                 285
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Thr Leu Ala Lys Met Arg Glu Leu Glu Arg Leu Asp Leu Ser Asn Asn
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305                 310                 315                 320

Ala Gln Leu Leu Leu Arg Asn Asn Pro Trp Phe Cys Gly Cys Asn Leu
                325                 330                 335

Met Trp Leu Arg Asp Trp Val Lys Ala Arg Ala Ala Val Val Asn Val
            340                 345                 350

Arg Gly Leu Met Cys Gln Gly Pro Glu Lys Val Arg Gly Met Ala Ile
        355                 360                 365

Lys Asp Ile Thr Ser Glu Met Asp Glu Cys Phe Glu Thr Gly Pro Gln
    370                 375                 380

Gly Gly Val Ala Asn Ala Ala Ala Lys Thr Thr Ala Ser Asn His Ala
385                 390                 395                 400

Ser Ala Thr Thr Pro Gln Gly Ser Leu Phe Thr Leu Lys Ala Lys Arg
                405                 410                 415

Pro Gly Leu Arg Leu Pro Asp Ser Asn Ile Asp Tyr Pro Met Ala Thr
            420                 425                 430

Gly Asp Gly Ala Lys Thr Leu Ala Ile His Val Lys Ala Leu Thr Ala
        435                 440                 445

Asp Ser Ile Arg Ile Thr Trp Lys Ala Thr Leu Pro Ala Ser Ser Phe
    450                 455                 460

Arg Leu Ser Trp Leu Arg Leu Gly His Ser Pro Ala Val Gly Ser Ile
465                 470                 475                 480

Thr Glu Thr Leu Val Gln Gly Asp Lys Thr Glu Tyr Leu Leu Thr Ala
                485                 490                 495

Leu Glu Pro Lys Ser Thr Tyr Ile Ile Cys Met Val Thr Met Glu Thr
            500                 505                 510

Ser Asn Ala Tyr Val Ala Asp Glu Thr Pro Val Cys Ala Lys Ala Glu
        515                 520                 525

Thr Ala Asp Ser Tyr Gly Pro Thr Thr Thr Leu Asn Gln Glu Gln Asn
    530                 535                 540

Ala Gly Pro Met Ala Ser Leu Pro Leu Ala Gly Ile Ile Gly Gly Ala
545                 550                 555                 560

Val Ala Leu Val Phe Leu Phe Leu Val Leu Gly Ala Ile Cys Trp Tyr
                565                 570                 575

Val His Gln Ala Gly Glu Leu Leu Thr Arg Glu Arg Ala Tyr Asn Arg
            580                 585                 590
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Gly Ser Arg Lys Lys Asp Asp Tyr Met Glu Ser Gly Thr Lys Lys Asp
595 600 605

Asn Ser Ile Leu Glu Ile Arg Gly Pro Gly Leu Gln Met Leu Pro Ile
610 615 620

Asn Pro Tyr Arg Ala Lys Glu Glu Tyr Val Val His Thr Ile Phe Pro
625 630 635 640

Ser Asn Gly Ser Ser Leu Cys Lys Ala Thr His Thr Ile Gly Tyr Gly
645 650 655

Thr Thr Arg Gly Tyr Arg Asp Gly Gly Ile Pro Asp Ile Asp Tyr Ser
660 665 670

Tyr Thr

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<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Ag190 Forward
PCR Primer Sequence

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<210> 9
<211> 27
<212> DNA
<213> Artificial Sequence

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PCR Primer Sequence

<400> 9
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<210> 10
<211> 19
<212> DNA
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PCR Primer Sequence

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<210> 11
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<213> Artificial Sequence

<220>
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PCR Primer Sequence

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cgcagtttca ctcgggagat 20

<210> 12
<211> 31
<212> DNA
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<220>
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<210> 13
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PCR Primer Sequence

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PCR Primer Sequence

<400> 14
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<210> 15
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV2 Reverse
PCR Primer Sequence

<400> 15
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<210> 16
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Primer Sequence

<400> 16
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<210> 17
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Primer Sequence

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<210> 18
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Primer Sequence

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<210> 19
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<212> DNA
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Primer Sequence

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<210> 20
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Primer Sequence

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<210> 21
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<223> Description of Artificial Sequence: NOV2 S6 PCR
Primer Sequence

<400> 21
gcggccacct gggtccag 18

<210> 22
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV2 S7 PCR
Primer Sequence

<400> 22
cccgagcagc cgaacggc 18

<210> 23
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV2 S8 PCR
Primer Sequence

<400> 23
gccgttcggc tgctcggg 18

<210> 24

<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV3 Forward
PCR Primer Sequence

<400> 24
ggatccacca cctgcccctc ggtgtgc 27

<210> 25
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV3 Reverse
PCR Primer Sequence

<400> 25
ctcgaggcca gcgttctgct cctggttgag tgtgg 35

<210> 26
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV3 S1 PCR
Primer Sequence

<400> 26
cgcaccattg ccagggac 18

<210> 27
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV3 S2 PCR
Primer Sequence

<400> 27
gtccctggca atggtgcg 18

<210> 28
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: NOV3 S3 PCR Primer Sequence

<400> 28
ctggtgcgca attcgctggc c 21

<210> 29
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV3 S4 PCR Primer Sequence

<400> 29
ggccagcgaa ttgcgcacca g 21

<210> 30
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV3 S5 PCR Primer Sequence

<400> 30
cacgcctctg ccaccacg 18

<210> 31
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV3 S6 PCR Primer Sequence

<400> 31
cgtggtggca gaggcgtg 18

<210> 32
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: pSec-V5 His Forward Oligonucleotide Primer Sequence

<400> 32
ctcgtcctcg agggtaagcc tatccctaac 30

<210> 33
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: pSec-V5 His
Reverse Oligonucleotide Primer Sequence

<400> 33
ctcgtcgggc ccctgatcag cgggtttaaa c 31

<210> 34
<211> 40
<212> PRT
<213> Homo sapiens

<400> 34
Met Ala Asp Lys Pro Asp Met Gly Glu Ile Ala Ser Phe Asp Lys Ala
1 5 10 15

Lys Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys
20 25 30

Glu Thr Ile Glu Gln Glu Lys Arg
35 40

<210> 35
<211> 10
<212> PRT
<213> Homo sapiens

<400> 35
Lys Leu Lys Lys Thr Glu Thr Gln Glu Asn
1 5 10

<210> 36
<211> 38
<212> PRT
<213> Homo sapiens

<400> 36
Ala Asp Lys Pro Asp Met Gly Glu Ile Ala Ser Phe Asp Lys Ala Lys
1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys Glu
20 25 30

Thr Ile Glu Gln Glu Lys
35

<210> 37
<211> 40
<212> PRT
<213> Bos taurus

<400> 37
Ala Asp Lys Pro Asp Leu Gly Glu Ile Asn Ser Phe Asp Lys Ala Lys
1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys Glu
20 25 30

Thr Ile Glu Gln Glu Lys Gln Ala
35 40

<210> 38
<211> 40
<212> PRT
<213> Sus scrofa

<400> 38
Ala Asp Lys Pro Asp Met Gly Glu Ile Asn Ser Phe Asp Lys Ala Lys
1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys Glu
20 25 30

Thr Ile Glu Gln Glu Lys Gln Ala
35 40

<210> 39
<211> 40
<212> PRT
<213> Homo sapiens

<400> 39
Ser Asp Lys Pro Asp Met Ala Glu Ile Glu Lys Phe Asp Lys Ser Lys
1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys Glu
20 25 30

Thr Ile Glu Gln Glu Lys Gln Ala
35 40

<210> 40
<211> 41
<212> PRT
<213> Mus musculus

<400> 40
Met Ser Asp Lys Pro Asp Met Ala Glu Ile Glu Lys Phe Asp Lys Ser
1 5 10 15

```
Lys Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys
             20                  25                  30

Glu Thr Ile Glu Gln Glu Lys Gln Ala
         35                  40
```

<210> 41
<211> 40
<212> PRT
<213> Oryctolagus cuniculus

<400> 41

```
Ala Asp Lys Pro Asp Met Ala Glu Ile Glu Lys Phe Asp Lys Ser Lys
  1               5                  10                  15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys Glu
             20                  25                  30

Thr Ile Glu Gln Glu Lys Gln Ala
         35                  40
```

<210> 42
<211> 39
<212> PRT
<213> Xenopus laevis

<400> 42

```
Ser Asp Lys Pro Asp Met Ala Glu Ile Glu Lys Phe Asp Lys Ala Lys
  1               5                  10                  15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys Glu
             20                  25                  30

Thr Ile Glu Gln Glu Lys Gln
         35
```

<210> 43
<211> 40
<212> PRT
<213> Homo sapiens

<400> 43

```
Ser Asp Lys Pro Gly Met Ala Glu Ile Glu Lys Phe Asp Lys Ser Lys
  1               5                  10                  15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Ser Ser Lys Glu
             20                  25                  30

Thr Ile Glu Gln Glu Arg Gln Ala
         35                  40
```

<210> 44
<211> 40

<212> PRT
<213> Oncorhynchus mykiss

<400> 44
Ser Asp Lys Pro Asn Leu Glu Glu Val Ala Ser Phe Asp Lys Thr Lys
1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Thr Lys Glu
20 25 30

Thr Ile Glu Gln Glu Lys Gln Ala
35 40

<210> 45
<211> 40
<212> PRT
<213> Oncorhynchus mykiss

<400> 45
Ser Asp Lys Pro Asp Leu Ala Glu Val Ser Asn Phe Asp Lys Thr Lys
1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Thr Lys Glu
20 25 30

Thr Ile Glu Gln Glu Lys Gln Ala
35 40

<210> 46
<211> 40
<212> PRT
<213> Lateolabrax japonicus

<400> 46
Ser Asp Lys Pro Asp Ile Ser Glu Val Thr Ser Phe Asp Lys Thr Lys
1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys Glu
20 25 30

Thr Ile Glu Gln Glu Lys Ala Ala
35 40

<210> 47
<211> 39
<212> PRT
<213> Rattus norvegicus

<400> 47
Met Ser Asp Lys Pro Asp Leu Ser Glu Val Glu Thr Phe Asp Lys Ser
1 5 10 15

Lys Leu Lys Lys Thr Asn Thr Glu Glu Lys Asn Thr Leu Pro Ser Lys
20 25 30

Glu Thr Ile Gln Gln Glu Lys
35

<210> 48
<211> 38
<212> PRT
<213> Homo sapiens

<400> 48
Ser Asp Lys Pro Asp Leu Ser Glu Val Glu Lys Phe Asp Arg Ser Lys
1 5 10 15

Leu Lys Lys Thr Asn Thr Glu Glu Lys Asn Thr Leu Pro Ser Lys Glu
20 25 30

Thr Ile Gln Gln Glu Lys
35

<210> 49
<211> 35
<212> PRT
<213> Drosophila melanogaster

<400> 49
Ile Ala Gly Ile Glu Asn Phe Asp Ala Lys Lys Leu Lys His Thr Glu
1 5 10 15

Thr Asn Glu Lys Asn Val Leu Pro Thr Lys Glu Val Ile Glu Ala Glu
20 25 30

Lys Gln Ala
35

<210> 50
<211> 31
<212> PRT
<213> Drosophila melanogaster

<400> 50
Gly Ile Thr Ala Phe Asn Gln Asn Asn Leu Lys His Thr Glu Thr Asn
1 5 10 15

Glu Lys Asn Pro Leu Pro Asp Lys Glu Ala Ile Glu Gln Glu Lys
20 25 30

<210> 51
<211> 38
<212> PRT
<213> Homo sapiens

<400> 51
Ala Asp Lys Pro Asp Met Gly Glu Ile Ala Ser Phe Asp Lys Ala Lys

```
  1               5                  10                  15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys Glu
            20                  25                  30

Thr Ile Glu Gln Glu Lys
        35
```

<210> 52
<211> 991
<212> PRT
<213> Mus musculus

<400> 52

```
Met Ala Pro Ala Arg Ala Arg Leu Ser Pro Ala Leu Trp Val Val Thr
  1               5                  10                  15

Ala Ala Ala Ala Ala Thr Cys Val Ser Ala Gly Arg Gly Glu Val Asn
            20                  25                  30

Leu Leu Asp Thr Ser Thr Ile His Gly Asp Trp Gly Trp Leu Thr Tyr
        35                  40                  45

Pro Ala His Gly Trp Asp Ser Ile Asn Glu Val Asp Glu Ser Phe Arg
    50                  55                  60

Pro Ile His Thr Tyr Gln Val Cys Asn Val Met Ser Pro Asn Gln Asn
65                  70                  75                  80

Asn Trp Leu Arg Thr Asn Trp Val Pro Arg Asp Gly Ala Arg Arg Val
                85                  90                  95

Tyr Ala Glu Ile Lys Phe Thr Leu Arg Asp Cys Asn Ser Ile Pro Gly
            100                 105                 110

Val Leu Gly Thr Cys Lys Glu Thr Phe Asn Leu His Tyr Leu Glu Ser
        115                 120                 125

Asp Arg Asp Leu Gly Ala Ser Thr Gln Glu Ser Gln Phe Leu Lys Ile
    130                 135                 140

Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr Gly Ala Asp Leu Gly Val
145                 150                 155                 160

Arg Arg Leu Lys Leu Asn Thr Glu Val Arg Gly Val Gly Pro Leu Ser
                165                 170                 175

Lys Arg Gly Phe Tyr Leu Ala Phe Gln Asp Ile Gly Ala Cys Leu Ala
            180                 185                 190

Ile Leu Ser Leu Arg Ile Tyr Tyr Lys Lys Cys Pro Ala Met Val Arg
        195                 200                 205

Asn Leu Ala Ala Phe Ser Glu Ala Val Thr Gly Ala Asp Ser Ser Ser
    210                 215                 220
```

```
Leu Val Glu Val Arg Gly Gln Cys Val Arg His Ser Glu Glu Arg Asp
225                 230                 235                 240

Thr Pro Lys Met Tyr Cys Ser Ala Glu Gly Glu Trp Leu Val Pro Ile
                245                 250                 255

Gly Lys Cys Val Cys Ser Ala Gly Tyr Glu Glu Arg Arg Asp Ala Cys
            260                 265                 270

Met Ala Cys Glu Leu Gly Phe Tyr Lys Ser Ala Pro Gly Asp Gln Leu
        275                 280                 285

Cys Ala Arg Cys Pro Pro His Ser His Ser Ala Thr Pro Ala Ala Gln
    290                 295                 300

Thr Cys Arg Cys Asp Leu Ser Tyr Tyr Arg Ala Ala Leu Asp Pro Pro
305                 310                 315                 320

Ser Ala Ala Cys Thr Arg Pro Pro Ser Ala Pro Val Asn Leu Ile Ser
                325                 330                 335

Ser Val Asn Gly Thr Ser Val Thr Leu Glu Trp Ala Pro Pro Leu Asp
            340                 345                 350

Pro Gly Gly Arg Ser Asp Ile Thr Tyr Asn Ala Val Cys Arg Arg Cys
        355                 360                 365

Pro Trp Ala Leu Ser His Cys Glu Ala Cys Gly Ser Gly Thr Arg Phe
    370                 375                 380

Val Pro Gln Gln Thr Ser Leu Ala Gln Ala Ser Leu Leu Val Ala Asn
385                 390                 395                 400

Leu Leu Ala His Met Asn Tyr Ser Phe Trp Ile Glu Ala Val Asn Gly
                405                 410                 415

Val Ser Asn Leu Ser Pro Glu Pro Arg Ser Ala Ala Val Val Asn Ile
            420                 425                 430

Thr Thr Asn Gln Ala Ala Pro Ser Gln Val Val Val Ile Arg Gln Glu
        435                 440                 445

Arg Ala Gly Gln Thr Ser Val Ser Leu Leu Trp Gln Glu Pro Glu Gln
    450                 455                 460

Pro Asn Gly Ile Ile Leu Glu Tyr Glu Ile Lys Tyr Tyr Glu Lys Asp
465                 470                 475                 480

Lys Glu Met Gln Ser Tyr Ser Thr Leu Lys Ala Val Thr Thr Arg Ala
                485                 490                 495

Thr Val Ser Gly Leu Lys Pro Gly Thr Arg Tyr Val Phe Gln Val Arg
            500                 505                 510

Ala Arg Thr Ser Ala Gly Cys Gly Arg Phe Ser Gln Ala Met Glu Val
        515                 520                 525
```

```
Glu Thr Gly Lys Pro Arg Pro Arg Tyr Asp Thr Arg Thr Ile Val Trp
    530                 535                 540

Ile Cys Leu Thr Leu Ile Thr Gly Leu Val Val Leu Leu Leu Leu Leu
545                 550                 555                 560

Ile Cys Lys Lys Arg His Cys Gly Tyr Ser Lys Ala Phe Gln Asp Ser
                565                 570                 575

Asp Glu Glu Lys Met His Tyr Gln Asn Gly Gln Ala Pro Pro Pro Val
            580                 585                 590

Phe Leu Pro Leu Asn His Pro Pro Gly Lys Phe Pro Glu Thr Gln Phe
        595                 600                 605

Ser Ala Glu Pro His Thr Tyr Glu Glu Pro Gly Arg Ala Gly Arg Ser
    610                 615                 620

Phe Thr Arg Glu Ile Glu Ala Ser Arg Ile His Ile Glu Lys Ile Ile
625                 630                 635                 640

Gly Ser Gly Glu Ser Gly Glu Val Cys Tyr Gly Arg Leu Gln Val Pro
                645                 650                 655

Gly Gln Arg Asp Val Pro Val Ala Ile Lys Ala Leu Lys Ala Gly Tyr
            660                 665                 670

Thr Glu Arg Gln Arg Gln Asp Phe Leu Ser Glu Ala Ala Ile Met Gly
        675                 680                 685

Gln Phe Asp His Pro Asn Ile Ile Arg Leu Glu Gly Val Val Thr Arg
    690                 695                 700

Gly Arg Leu Ala Met Ile Val Thr Glu Tyr Met Glu Asn Gly Ser Leu
705                 710                 715                 720

Asp Ala Phe Leu Arg Thr His Asp Gly Gln Phe Thr Ile Val Gln Leu
                725                 730                 735

Val Gly Met Leu Arg Gly Val Gly Ala Gly Met Arg Tyr Leu Ser Asp
            740                 745                 750

Leu Gly Tyr Ile His Arg Asp Leu Ala Ala Arg Asn Val Leu Val Asp
        755                 760                 765

Gly Arg Leu Val Cys Lys Val Ser Asp Phe Gly Leu Ser Arg Ala Leu
    770                 775                 780

Glu Asp Asp Pro Glu Ala Ala Tyr Thr Thr Ala Gly Gly Lys Ile Pro
785                 790                 795                 800

Ile Arg Trp Thr Ala Pro Glu Ala Ile Ala Phe Arg Thr Phe Ser Ser
                805                 810                 815

Ala Ser Asp Val Trp Ser Phe Gly Val Val Met Trp Glu Val Leu Ala
            820                 825                 830
```

```
Tyr Gly Glu Arg Pro Tyr Trp Asn Met Thr Asn Gln Asp Val Ile Ser
        835                 840                 845

Ser Val Glu Glu Gly Tyr Arg Leu Pro Ala Pro Met Gly Cys Pro Arg
    850                 855                 860

Ala Leu His Gln Leu Met Leu Asp Cys Trp His Lys Asp Arg Ala Gln
865                 870                 875                 880

Arg Pro Arg Phe Ala His Val Val Ser Val Leu Asp Ala Leu Val His
                885                 890                 895

Ser Pro Glu Ser Leu Arg Ala Thr Ala Thr Val Ser Arg Cys Pro Pro
            900                 905                 910

Pro Ala Phe Ala Arg Ser Cys Phe Asp Leu Arg Ala Gly Gly Ser Gly
        915                 920                 925

Asn Gly Asp Leu Thr Val Gly Asp Trp Leu Asp Ser Ile Arg Met Gly
    930                 935                 940

Arg Tyr Arg Asp His Phe Ala Ala Gly Gly Tyr Ser Ser Leu Gly Met
945                 950                 955                 960

Val Leu Arg Met Asn Ala Gln Asp Val Arg Ala Leu Gly Ile Thr Leu
                965                 970                 975

Met Gly His Gln Lys Lys Ile Leu Gly Ser Ile Gln Thr Met Arg
            980                 985                 990


<210> 53
<211> 992
<212> PRT
<213> Homo sapiens

<400> 53
Met Ala Pro Ala Arg Gly Arg Leu Pro Pro Ala Leu Trp Val Val Thr
  1               5                  10                  15

Ala Ala Ala Ala Ala Ala Thr Cys Val Ser Ala Ala Arg Gly Glu Val
             20                  25                  30

Asn Leu Leu Asp Thr Ser Thr Ile His Gly Asp Trp Gly Trp Leu Thr
         35                  40                  45

Tyr Pro Ala His Gly Trp Asp Ser Ile Asn Glu Val Asp Glu Ser Phe
     50                  55                  60

Gln Pro Ile His Thr Tyr Gln Val Cys Asn Val Met Ser Pro Asn Gln
 65                  70                  75                  80

Asn Asn Trp Leu Arg Thr Ser Trp Val Pro Arg Asp Gly Ala Arg Arg
                 85                  90                  95

Val Tyr Ala Glu Ile Lys Phe Thr Leu Arg Asp Cys Asn Ser Met Pro
            100                 105                 110
```

```
Gly Val Leu Gly Thr Cys Lys Glu Thr Phe Asn Leu Tyr Tyr Leu Glu
        115                 120                 125

Ser Asp Arg Asp Leu Gly Ala Ser Thr Gln Glu Ser Gln Phe Leu Lys
    130                 135                 140

Ile Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr Gly Ala Asp Leu Gly
145                 150                 155                 160

Val Arg Arg Leu Lys Leu Asn Thr Glu Val Arg Ser Val Gly Pro Leu
                165                 170                 175

Ser Lys Arg Gly Phe Tyr Leu Ala Phe Gln Asp Ile Gly Ala Cys Leu
            180                 185                 190

Ala Ile Leu Ser Leu Arg Ile Tyr Tyr Lys Lys Cys Pro Ala Met Val
        195                 200                 205

Arg Asn Leu Ala Ala Phe Ser Glu Ala Val Thr Gly Ala Asp Ser Ser
    210                 215                 220

Ser Leu Val Glu Val Arg Gly Gln Cys Val Arg His Ser Glu Glu Arg
225                 230                 235                 240

Asp Thr Pro Lys Met Tyr Cys Ser Ala Glu Gly Glu Trp Leu Val Pro
                245                 250                 255

Ile Gly Lys Cys Val Cys Ser Ala Gly Tyr Glu Glu Arg Arg Asp Ala
            260                 265                 270

Cys Val Ala Cys Glu Leu Gly Phe Tyr Lys Ser Ala Pro Gly Asp Gln
        275                 280                 285

Leu Cys Ala Arg Cys Pro Pro His Ser His Ser Ala Ala Pro Ala Ala
    290                 295                 300

Gln Ala Cys His Cys Asp Leu Ser Tyr Tyr Arg Ala Ala Leu Asp Pro
305                 310                 315                 320

Pro Ser Ser Ala Cys Thr Arg Pro Pro Ser Ala Pro Val Asn Leu Ile
                325                 330                 335

Ser Ser Val Asn Gly Thr Ser Val Thr Leu Glu Trp Ala Pro Pro Leu
            340                 345                 350

Asp Pro Gly Gly Arg Ser Asp Ile Thr Tyr Asn Ala Val Cys Arg Arg
        355                 360                 365

Cys Pro Trp Ala Leu Ser Arg Cys Glu Ala Cys Gly Ser Gly Thr Arg
    370                 375                 380

Phe Val Pro Gln Gln Thr Ser Leu Val Gln Ala Ser Leu Leu Val Ala
385                 390                 395                 400

Asn Leu Leu Ala His Met Asn Tyr Ser Phe Trp Ile Glu Ala Val Asn
                405                 410                 415
```

```
Gly Val Ser Asp Leu Ser Pro Glu Pro Arg Arg Ala Ala Val Val Asn
            420                 425                 430

Ile Thr Thr Asn Gln Ala Ala Pro Ser Gln Val Val Val Ile Arg Gln
        435                 440                 445

Glu Arg Ala Gly Gln Thr Ser Val Ser Leu Leu Trp Gln Glu Pro Glu
    450                 455                 460

Gln Pro Asn Gly Ile Ile Leu Glu Tyr Glu Ile Lys Tyr Tyr Glu Lys
465                 470                 475                 480

Asp Lys Glu Met Gln Ser Tyr Ser Thr Leu Lys Ala Val Thr Thr Arg
                485                 490                 495

Ala Thr Val Ser Gly Leu Lys Pro Gly Thr Arg Tyr Val Phe Gln Val
            500                 505                 510

Arg Ala Arg Thr Ser Ala Gly Cys Gly Arg Phe Ser Gln Ala Met Glu
        515                 520                 525

Val Glu Thr Gly Lys Pro Arg Pro Arg Tyr Asp Thr Arg Thr Ile Val
    530                 535                 540

Trp Ile Cys Leu Thr Leu Ile Thr Gly Leu Val Val Leu Leu Leu Leu
545                 550                 555                 560

Leu Ile Cys Lys Lys Arg His Cys Gly Tyr Ser Lys Ala Phe Gln Asp
                565                 570                 575

Ser Asp Glu Glu Lys Met His Tyr Gln Asn Gly Gln Ala Pro Pro Pro
            580                 585                 590

Val Phe Leu Pro Leu His His Pro Pro Gly Lys Leu Pro Glu Pro Gln
        595                 600                 605

Phe Tyr Ala Glu Pro His Thr Tyr Glu Glu Pro Gly Arg Ala Gly Arg
    610                 615                 620

Ser Phe Thr Arg Glu Ile Glu Ala Ser Arg Ile His Ile Glu Lys Ile
625                 630                 635                 640

Ile Gly Ser Gly Asp Ser Gly Glu Val Cys Tyr Gly Arg Leu Arg Val
                645                 650                 655

Pro Gly Gln Arg Asp Val Pro Val Ala Ile Lys Ala Leu Lys Ala Gly
            660                 665                 670

Tyr Thr Glu Arg Gln Arg Arg Asp Phe Leu Ser Glu Ala Ser Ile Met
        675                 680                 685

Gly Gln Phe Asp His Pro Asn Ile Ile Arg Leu Glu Gly Val Val Thr
    690                 695                 700

Arg Gly Arg Leu Ala Met Ile Val Thr Glu Tyr Met Glu Asn Gly Ser
705                 710                 715                 720
```

```
Leu Asp Thr Phe Leu Arg Thr His Asp Gly Gln Phe Thr Ile Met Gln
                725                 730                 735

Leu Val Gly Met Leu Arg Gly Val Gly Ala Gly Met Arg Tyr Leu Ser
            740                 745                 750

Asp Leu Gly Tyr Val His Arg Asp Leu Ala Ala Arg Asn Val Leu Val
        755                 760                 765

Asp Ser Asn Leu Val Cys Lys Val Ser Asp Phe Gly Leu Ser Arg Val
    770                 775                 780

Leu Glu Asp Asp Pro Asp Ala Ala Tyr Thr Thr Thr Gly Gly Lys Ile
785                 790                 795                 800

Pro Ile Arg Trp Thr Ala Pro Glu Ala Ile Ala Phe Arg Thr Phe Ser
                805                 810                 815

Ser Ala Ser Asp Val Trp Ser Phe Gly Val Val Met Trp Glu Val Leu
            820                 825                 830

Ala Tyr Gly Glu Arg Pro Tyr Trp Asn Met Thr Asn Arg Asp Val Ile
        835                 840                 845

Ser Ser Val Glu Glu Gly Tyr Arg Leu Pro Ala Pro Met Gly Cys Pro
    850                 855                 860

His Ala Leu His Gln Leu Met Leu Asp Cys Trp His Lys Asp Arg Ala
865                 870                 875                 880

Gln Arg Pro Arg Phe Ser Gln Ile Val Ser Val Leu Asp Ala Leu Ile
                885                 890                 895

Arg Ser Pro Glu Ser Leu Arg Ala Thr Ala Thr Val Ser Arg Cys Pro
            900                 905                 910

Pro Pro Ala Phe Val Arg Ser Cys Phe Asp Leu Arg Gly Gly Ser Gly
        915                 920                 925

Gly Gly Gly Gly Leu Thr Val Gly Asp Trp Leu Asp Ser Ile Arg Met
    930                 935                 940

Gly Arg Tyr Arg Asp His Phe Ala Ala Gly Gly Tyr Ser Ser Leu Gly
945                 950                 955                 960

Met Val Leu Arg Met Asn Ala Gln Asp Val Arg Ala Leu Gly Ile Thr
                965                 970                 975

Leu Met Gly His Gln Lys Lys Ile Leu Gly Ser Ile Gln Thr Met Arg
            980                 985                 990
```

<210> 54

<211> 450
<212> PRT
<213> Mus musculus

<400> 54
Met Ala Pro Ala Arg Ala Arg Leu Ser Pro Ala Leu Trp Val Val Thr
1 5 10 15

Ala Ala Ala Ala Ala Thr Cys Val Ser Ala Gly Arg Gly Glu Val Asn
20 25 30

Leu Leu Asp Thr Ser Thr Ile His Gly Asp Trp Gly Trp Leu Thr Tyr
35 40 45

Pro Ala His Gly Trp Asp Ser Ile Asn Glu Val Asp Glu Ser Phe Arg
50 55 60

Pro Ile His Thr Tyr Gln Val Cys Asn Val Met Ser Pro Asn Gln Asn
65 70 75 80

Asn Trp Leu Arg Thr Asn Trp Val Pro Arg Asp Gly Ala Arg Arg Val
85 90 95

Tyr Ala Glu Ile Lys Phe Thr Leu Arg Asp Cys Asn Ser Ile Pro Gly
100 105 110

Val Leu Gly Thr Cys Lys Glu Thr Phe Asn Leu His Tyr Leu Glu Ser
115 120 125

Asp Arg Asp Leu Gly Ala Ser Thr Gln Glu Ser Gln Phe Leu Lys Ile
130 135 140

Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr Gly Ala Asp Leu Gly Val
145 150 155 160

Arg Arg Leu Lys Leu Asn Thr Glu Val Arg Gly Val Gly Pro Leu Ser
165 170 175

Lys Arg Gly Phe Tyr Leu Ala Phe Gln Asp Ile Gly Ala Cys Leu Ala
180 185 190

Ile Leu Ser Leu Arg Ile Tyr Tyr Lys Lys Cys Pro Ala Met Val Arg
195 200 205

Asn Leu Ala Ala Phe Ser Glu Ala Val Thr Gly Ala Asp Ser Ser Ser
210 215 220

Leu Val Glu Val Arg Gly Gln Cys Val Arg His Ser Glu Glu Arg Asp
225 230 235 240

Thr Pro Lys Met Tyr Cys Ser Ala Glu Gly Glu Trp Leu Val Pro Ile
245 250 255

Gly Lys Cys Val Cys Ser Ala Gly Tyr Glu Glu Arg Arg Asp Ala Cys
260 265 270

Met Ala Cys Glu Leu Gly Phe Tyr Lys Ser Ala Pro Gly Asp Gln Leu

```
        275                 280                 285

Cys Ala Arg Cys Pro Pro His Ser His Ser Ala Thr Pro Ala Ala Gln
    290                 295                 300

Thr Cys Arg Cys Asp Leu Ser Tyr Tyr Arg Ala Ala Leu Asp Pro Pro
305                 310                 315                 320

Ser Ala Ala Cys Thr Arg Pro Pro Ser Ala Pro Val Asn Leu Ile Ser
                325                 330                 335

Ser Val Asn Gly Thr Ser Val Thr Leu Glu Trp Ala Pro Pro Leu Asp
            340                 345                 350

Pro Gly Gly Arg Ser Asp Ile Thr Tyr Asn Ala Val Cys Arg Arg Cys
        355                 360                 365

Pro Trp Ala Leu Ser His Cys Glu Ala Cys Gly Ser Gly Thr Arg Phe
    370                 375                 380

Val Pro Gln Gln Thr Ser Leu Ala Gln Ala Ser Leu Leu Val Ala Asn
385                 390                 395                 400

Leu Leu Ala His Met Asn Tyr Ser Phe Trp Ile Glu Ala Val Asn Gly
                405                 410                 415

Val Ser Asn Leu Ser Pro Glu Pro Arg Ser Ala Ala Val Val Asn Ile
            420                 425                 430

Thr Thr Asn Gln Ala Ala Pro Ser Gln Val Val Val Ile Arg Gln Glu
        435                 440                 445

Arg Ala
    450
```

<210> 55
<211> 480
<212> PRT
<213> Homo sapiens

```
<400> 55
Met Arg Gly Ser Gly Pro Arg Gly Ala Gly His Arg Arg Pro Pro Ser
  1               5                  10                  15

Gly Gly Gly Asp Thr Pro Ile Thr Pro Ala Ser Leu Ala Gly Cys Tyr
             20                  25                  30

Ser Ala Pro Arg Arg Ala Pro Leu Trp Thr Cys Leu Leu Leu Cys Ala
         35                  40                  45

Ala Leu Arg Thr Leu Leu Ala Ser Pro Ser Asn Glu Val Asn Leu Leu
     50                  55                  60

Asp Ser Arg Thr Val Met Gly Asp Leu Gly Trp Ile Ala Phe Pro Lys
 65                  70                  75                  80
```

```
Asn Gly Trp Glu Glu Ile Gly Glu Val Asp Glu Asn Tyr Ala Pro Ile
                 85                  90                  95

His Thr Tyr Gln Val Cys Lys Val Met Glu Gln Asn Gln Asn Asn Trp
            100                 105                 110

Leu Leu Thr Ser Trp Ile Ser Asn Glu Gly Ala Ser Arg Ile Phe Ile
        115                 120                 125

Glu Leu Lys Phe Thr Leu Arg Asp Cys Asn Ser Leu Pro Gly Gly Leu
    130                 135                 140

Gly Thr Cys Lys Glu Thr Phe Asn Met Tyr Tyr Phe Glu Ser Asp Asp
145                 150                 155                 160

Gln Asn Gly Arg Asn Ile Lys Glu Asn Gln Tyr Ile Lys Ile Asp Thr
                165                 170                 175

Ile Ala Ala Asp Glu Ser Phe Thr Glu Leu Asp Leu Gly Asp Arg Val
            180                 185                 190

Met Lys Leu Asn Thr Glu Val Arg Asp Val Gly Pro Leu Ser Lys Lys
        195                 200                 205

Gly Phe Tyr Leu Ala Phe Gln Asp Val Gly Ala Cys Ile Ala Leu Val
    210                 215                 220

Ser Val Arg Val Tyr Tyr Lys Lys Cys Pro Ser Val Val Arg His Leu
225                 230                 235                 240

Ala Val Phe Pro Asp Thr Ile Thr Gly Ala Asp Ser Ser Gln Leu Leu
                245                 250                 255

Glu Val Ser Gly Ser Cys Val Asn His Ser Val Thr Asp Glu Pro Pro
            260                 265                 270

Lys Met His Cys Ser Ala Glu Gly Glu Trp Leu Val Pro Ile Gly Lys
        275                 280                 285

Cys Met Cys Lys Ala Gly Tyr Glu Glu Lys Asn Gly Thr Cys Gln Val
    290                 295                 300

Cys Arg Pro Gly Phe Phe Lys Ala Ser Pro His Ile Gln Ser Cys Gly
305                 310                 315                 320

Lys Cys Pro Pro His Ser Tyr Thr His Glu Glu Ala Ser Thr Ser Cys
                325                 330                 335

Val Cys Glu Lys Asp Tyr Phe Arg Arg Glu Ser Asp Pro Pro Thr Met
            340                 345                 350

Ala Cys Thr Arg Pro Pro Ser Ala Pro Arg Asn Ala Ile Ser Asn Val
        355                 360                 365

Asn Glu Thr Ser Val Phe Leu Glu Trp Ile Pro Pro Ala Asp Thr Gly
    370                 375                 380
```

```
Gly Arg Lys Asp Val Ser Tyr Tyr Ile Ala Cys Lys Lys Cys Asn Ser
385                 390                 395                 400

His Ala Gly Val Cys Glu Glu Cys Gly Gly His Val Arg Tyr Leu Pro
                405                 410                 415

Arg Gln Ser Gly Leu Lys Asn Thr Ser Val Met Met Val Asp Leu Leu
            420                 425                 430

Ala His Thr Asn Tyr Thr Phe Glu Ile Glu Ala Val Asn Gly Val Ser
        435                 440                 445

Asp Leu Ser Pro Gly Ala Arg Gln Tyr Val Ser Val Asn Val Thr Thr
    450                 455                 460

Asn Gln Ala Ala Pro Ser Pro Val Thr Asn Val Lys Lys Gly Lys Ile
465                 470                 475                 480
```

<210> 56
<211> 456
<212> PRT
<213> Gallus gallus

<400> 56

```
Met Gly Leu Arg Gly Gly Gly Gly Arg Ala Gly Gly Pro Ala Pro Gly
  1               5                  10                  15

Trp Thr Cys Leu Leu Leu Cys Ala Ala Leu Arg Ser Leu Leu Ala Ser
             20                  25                  30

Pro Gly Ser Glu Val Asn Leu Leu Asp Ser Arg Thr Val Met Gly Asp
         35                  40                  45

Leu Gly Trp Ile Ala Tyr Pro Lys Asn Gly Trp Glu Glu Ile Gly Glu
     50                  55                  60

Val Asp Glu Asn Tyr Ala Pro Ile His Thr Tyr Gln Val Cys Lys Val
 65                  70                  75                  80

Met Glu Gln Asn Gln Asn Asn Trp Leu Leu Thr Ser Trp Ile Ser Asn
                85                  90                  95

Glu Gly Arg Pro Ala Ser Ser Phe Glu Leu Lys Phe Thr Leu Arg Asp
            100                 105                 110

Cys Asn Ser Leu Pro Gly Gly Leu Gly Thr Cys Lys Glu Thr Phe Asn
        115                 120                 125

Met Tyr Tyr Phe Glu Ser Asp Asp Glu Asp Gly Arg Asn Ile Arg Glu
    130                 135                 140

Asn Gln Tyr Ile Lys Ile Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr
145                 150                 155                 160
```

```
Glu Leu Asp Leu Gly Asp Arg Val Met Lys Leu Asn Thr Glu Val Arg
                165                 170                 175

Asp Val Gly Pro Leu Thr Lys Lys Gly Phe Tyr Leu Ala Phe Gln Asp
            180                 185                 190

Val Gly Ala Cys Ile Ala Leu Val Ser Val Arg Val Tyr Tyr Lys Lys
        195                 200                 205

Cys Pro Ser Val Ile Arg Asn Leu Ala Arg Phe Pro Asp Thr Ile Thr
    210                 215                 220

Gly Ala Asp Ser Ser Gln Leu Leu Glu Val Ser Gly Val Cys Val Asn
225                 230                 235                 240

His Ser Val Thr Asp Glu Ala Pro Lys Met His Cys Ser Ala Glu Gly
                245                 250                 255

Glu Trp Leu Val Pro Ile Gly Lys Cys Leu Cys Lys Ala Gly Tyr Glu
            260                 265                 270

Glu Lys Asn Asn Thr Cys Gln Val Cys Arg Pro Gly Phe Phe Lys Ala
        275                 280                 285

Ser Pro His Ser Pro Ser Cys Ser Lys Cys Pro Pro His Ser Tyr Thr
    290                 295                 300

Leu Asp Glu Ala Ser Thr Ser Cys Leu Cys Glu Glu His Tyr Phe Arg
305                 310                 315                 320

Arg Glu Ser Asp Pro Pro Thr Met Ala Cys Thr Arg Pro Pro Ser Ala
                325                 330                 335

Pro Arg Ser Ala Ile Ser Asn Val Asn Glu Thr Ser Val Phe Leu Glu
            340                 345                 350

Trp Ile Pro Pro Ala Asp Thr Gly Gly Arg Lys Asp Val Ser Tyr Tyr
        355                 360                 365

Ile Ala Cys Lys Lys Cys Asn Ser His Ser Gly Leu Cys Glu Ala Cys
    370                 375                 380

Gly Ser His Val Arg Tyr Leu Pro Gln Gln Thr Gly Leu Lys Asn Thr
385                 390                 395                 400

Ser Val Met Met Val Asp Leu Leu Ala His Thr Asn Tyr Thr Phe Glu
                405                 410                 415

Ile Glu Ala Val Asn Gly Val Ser Asp Gln Asn Pro Gly Ala Arg Gln
            420                 425                 430

Phe Val Ser Val Asn Val Thr Thr Asn Gln Ala Ala Pro Ser Pro Val
        435                 440                 445

Ser Ser Val Lys Lys Gly Lys Ile
    450                 455
```

<210> 57
<211> 649
<212> PRT
<213> Homo sapiens

<400> 57
Met Ile Ser Ala Ala Trp Ser Ile Phe Leu Ile Gly Thr Lys Ile Gly
1 5 10 15

Leu Phe Leu Gln Val Ala Pro Leu Ser Val Met Ala Lys Ser Cys Pro
20 25 30

Ser Val Cys Arg Cys Asp Ala Gly Phe Ile Tyr Cys Asn Asp Arg Phe
35 40 45

Leu Thr Ser Ile Pro Thr Gly Ile Pro Glu Asp Ala Thr Thr Leu Tyr
50 55 60

Leu Gln Asn Asn Gln Ile Asn Asn Ala Gly Ile Pro Ser Asp Leu Lys
65 70 75 80

Asn Leu Leu Lys Val Glu Arg Ile Tyr Leu Tyr His Asn Ser Leu Asp
85 90 95

Glu Phe Pro Thr Asn Leu Pro Lys Tyr Val Lys Glu Leu His Leu Gln
100 105 110

Glu Asn Asn Ile Arg Thr Ile Thr Tyr Asp Ser Leu Ser Lys Ile Pro
115 120 125

Tyr Leu Glu Glu Leu His Leu Asp Asp Asn Ser Val Ser Ala Val Ser
130 135 140

Ile Glu Glu Gly Ala Phe Arg Asp Ser Asn Tyr Leu Arg Leu Leu Phe
145 150 155 160

Leu Ser Arg Asn His Leu Ser Thr Ile Pro Trp Gly Leu Pro Arg Thr
165 170 175

Ile Glu Glu Leu Arg Leu Asp Asp Asn Arg Ile Ser Thr Ile Ser Ser
180 185 190

Pro Ser Leu Gln Gly Leu Thr Ser Leu Lys Arg Leu Val Leu Asp Gly
195 200 205

Asn Leu Leu Asn Asn His Gly Leu Gly Asp Lys Val Phe Phe Asn Leu
210 215 220

Val Asn Leu Thr Glu Leu Ser Leu Val Arg Asn Ser Leu Thr Ala Ala
225 230 235 240

Pro Val Asn Leu Pro Gly Thr Asn Leu Arg Lys Leu Tyr Leu Gln Asp
245 250 255

Asn His Ile Asn Arg Val Pro Pro Asn Ala Phe Ser Tyr Leu Arg Gln

```
            260                 265                 270

Leu Tyr Arg Leu Asp Met Ser Asn Asn Asn Leu Ser Asn Leu Pro Gln
        275                 280                 285

Gly Ile Phe Asp Asp Leu Asp Asn Ile Thr Gln Leu Ile Leu Arg Asn
    290                 295                 300

Asn Pro Trp Tyr Cys Gly Cys Lys Met Lys Trp Val Arg Asp Trp Leu
305                 310                 315                 320

Gln Ser Leu Pro Val Lys Val Asn Val Arg Gly Leu Met Cys Gln Ala
                325                 330                 335

Pro Glu Lys Val Arg Gly Met Ala Ile Lys Asp Leu Asn Ala Glu Leu
            340                 345                 350

Phe Asp Cys Lys Asp Ser Gly Ile Val Ser Thr Ile Gln Ile Thr Thr
        355                 360                 365

Ala Ile Pro Asn Thr Val Tyr Pro Ala Gln Gly Gln Trp Pro Ala Pro
    370                 375                 380

Val Thr Lys Gln Pro Asp Ile Lys Asn Pro Lys Leu Thr Lys Asp His
385                 390                 395                 400

Gln Thr Thr Gly Ser Pro Ser Arg Lys Thr Ile Thr Ile Thr Val Lys
                405                 410                 415

Ser Val Thr Ser Asp Thr Ile His Ile Ser Trp Lys Leu Ala Leu Pro
            420                 425                 430

Met Thr Ala Leu Arg Leu Ser Trp Leu Lys Leu Gly His Ser Pro Ala
        435                 440                 445

Phe Gly Ser Ile Thr Glu Thr Ile Val Thr Gly Glu Arg Ser Glu Tyr
    450                 455                 460

Leu Val Thr Ala Leu Glu Pro Asp Ser Pro Tyr Lys Val Cys Met Val
465                 470                 475                 480

Pro Met Glu Thr Ser Asn Leu Tyr Leu Phe Asp Glu Thr Pro Val Cys
                485                 490                 495

Ile Glu Thr Glu Thr Ala Pro Leu Arg Met Tyr Asn Pro Thr Thr Thr
            500                 505                 510

Leu Asn Arg Glu Gln Glu Lys Glu Pro Tyr Lys Asn Pro Asn Leu Pro
        515                 520                 525

Leu Ala Ala Ile Ile Gly Gly Ala Val Ala Leu Val Thr Ile Ala Leu
    530                 535                 540

Leu Ala Leu Val Cys Trp Tyr Val His Arg Asn Gly Ser Leu Phe Ser
545                 550                 555                 560

Arg Asn Cys Ala Tyr Ser Lys Gly Arg Arg Arg Lys Asp Asp Tyr Ala
```

```
                565                 570                 575

Glu Ala Gly Thr Lys Lys Asp Asn Ser Ile Leu Glu Ile Arg Glu Thr
            580                 585                 590

Ser Phe Gln Met Leu Pro Ile Ser Asn Glu Pro Ile Ser Lys Glu Glu
        595                 600                 605

Phe Val Ile His Thr Ile Phe Pro Pro Asn Gly Met Asn Leu Tyr Lys
    610                 615                 620

Asn Asn His Ser Glu Ser Ser Ser Asn Arg Ser Tyr Arg Asp Ser Gly
625                 630                 635                 640

Ile Pro Asp Ser Asp His Ser His Ser
                645
```

<210> 58
<211> 660
<212> PRT
<213> Homo sapiens

<400> 58

```
Met Gly Leu Gln Thr Thr Lys Trp Pro Ser His Gly Ala Phe Phe Leu
  1               5                  10                  15

Lys Ser Trp Leu Ile Ile Ser Leu Gly Leu Tyr Ser Gln Val Ser Lys
            20                  25                  30

Leu Leu Ala Cys Pro Ser Val Cys Arg Cys Asp Arg Asn Phe Val Tyr
        35                  40                  45

Cys Asn Glu Arg Ser Leu Thr Ser Val Pro Leu Gly Ile Pro Glu Gly
    50                  55                  60

Val Thr Val Leu Tyr Leu His Asn Asn Gln Ile Asn Asn Ala Gly Phe
65                  70                  75                  80

Pro Ala Glu Leu His Asn Val Gln Ser Val His Thr Val Tyr Leu Tyr
                85                  90                  95

Gly Asn Gln Leu Asp Glu Phe Pro Met Asn Leu Pro Lys Asn Val Arg
            100                 105                 110

Val Leu His Leu Gln Glu Asn Asn Ile Gln Thr Ile Ser Arg Ala Ala
        115                 120                 125

Leu Ala Gln Leu Leu Lys Leu Glu Glu Leu His Leu Asp Asp Asn Ser
    130                 135                 140

Ile Ser Thr Val Gly Val Glu Asp Gly Ala Phe Arg Glu Ala Ile Ser
145                 150                 155                 160

Leu Lys Leu Leu Phe Leu Ser Lys Asn His Leu Ser Ser Val Pro Val
                165                 170                 175
```

```
Gly Leu Pro Val Asp Leu Gln Glu Leu Arg Val Asp Glu Asn Arg Ile
            180                 185                 190

Ala Val Ile Ser Asp Met Ala Phe Gln Asn Leu Thr Ser Leu Glu Arg
        195                 200                 205

Leu Ile Val Asp Gly Asn Leu Leu Thr Asn Lys Gly Ile Ala Glu Gly
    210                 215                 220

Thr Phe Ser His Leu Thr Lys Leu Lys Glu Phe Ser Ile Val Arg Asn
225                 230                 235                 240

Ser Leu Ser His Pro Pro Pro Asp Leu Pro Gly Thr His Leu Ile Arg
                245                 250                 255

Leu Tyr Leu Gln Asp Asn Gln Ile Asn His Ile Pro Leu Thr Ala Phe
            260                 265                 270

Ser Asn Leu Arg Lys Leu Glu Arg Leu Asp Ile Ser Asn Asn Gln Leu
        275                 280                 285

Arg Met Leu Thr Gln Gly Val Phe Asp Asn Leu Ser Asn Leu Lys Gln
    290                 295                 300

Leu Thr Ala Arg Asn Asn Pro Trp Phe Cys Asp Cys Ser Ile Lys Trp
305                 310                 315                 320

Val Thr Glu Trp Leu Lys Tyr Ile Pro Ser Ser Leu Asn Val Arg Gly
                325                 330                 335

Phe Met Cys Gln Gly Pro Glu Gln Val Arg Gly Met Ala Val Arg Glu
            340                 345                 350

Leu Asn Met Asn Leu Leu Ser Cys Pro Thr Thr Thr Pro Gly Leu Pro
        355                 360                 365

Leu Phe Thr Pro Ala Pro Ser Thr Ala Ser Pro Thr Thr Gln Pro Pro
    370                 375                 380

Thr Leu Ser Ile Pro Asn Pro Ser Arg Ser Tyr Thr Pro Pro Thr Pro
385                 390                 395                 400

Thr Thr Ser Lys Leu Pro Thr Ile Pro Asp Trp Asp Gly Arg Glu Arg
                405                 410                 415

Val Thr Pro Pro Ile Ser Glu Arg Ile Gln Leu Ser Ile His Phe Val
            420                 425                 430

Asn Asp Thr Ser Ile Gln Val Ser Trp Leu Ser Leu Phe Thr Val Met
        435                 440                 445

Ala Tyr Lys Leu Thr Trp Val Lys Met Gly His Ser Leu Val Gly Gly
    450                 455                 460

Ile Val Gln Glu Arg Ile Val Ser Gly Glu Lys Gln His Leu Ser Leu
465                 470                 475                 480
```

```
Val Asn Leu Glu Pro Arg Ser Thr Tyr Arg Ile Cys Leu Val Pro Leu
                485                 490                 495

Asp Ala Phe Asn Tyr Arg Ala Val Glu Asp Thr Ile Cys Ser Glu Ala
            500                 505                 510

Thr Thr His Ala Ser Tyr Leu Asn Asn Gly Ser Asn Thr Ala Ser Ser
        515                 520                 525

His Glu Gln Thr Thr Ser His Ser Met Gly Ser Pro Phe Leu Leu Ala
    530                 535                 540

Gly Leu Ile Gly Gly Ala Val Ile Phe Val Leu Val Val Leu Leu Ser
545                 550                 555                 560

Val Phe Cys Trp His Met His Lys Lys Gly Arg Tyr Thr Ser Gln Lys
                565                 570                 575

Trp Lys Tyr Asn Arg Gly Arg Arg Lys Asp Asp Tyr Cys Glu Ala Gly
            580                 585                 590

Thr Lys Lys Asp Asn Ser Ile Leu Glu Met Thr Glu Thr Ser Phe Gln
        595                 600                 605

Ile Val Ser Leu Asn Asn Asp Gln Leu Leu Lys Gly Asp Phe Arg Leu
    610                 615                 620

Gln Pro Ile Tyr Thr Pro Asn Gly Gly Ile Asn Tyr Thr Asp Cys His
625                 630                 635                 640

Ile Pro Asn Asn Met Arg Tyr Cys Asn Ser Ser Val Pro Asp Leu Glu
                645                 650                 655

His Cys His Thr
            660


<210> 59
<211> 674
<212> PRT
<213> Homo sapiens

<400> 59
Met Val Val Ala His Pro Thr Ala Thr Ala Thr Thr Thr Pro Thr Ala
  1               5                  10                  15

Thr Val Thr Ala Thr Val Val Met Thr Thr Ala Thr Met Asp Leu Arg
             20                  25                  30

Asp Trp Leu Phe Leu Cys Tyr Gly Leu Ile Ala Phe Leu Thr Glu Val
         35                  40                  45

Ile Asp Ser Thr Thr Cys Pro Ser Val Cys Arg Cys Asp Asn Gly Phe
     50                  55                  60

Ile Tyr Cys Asn Asp Arg Gly Leu Thr Ser Ile Pro Ala Asp Ile Pro
 65                  70                  75                  80
```

```
Asp Asp Ala Thr Thr Leu Tyr Leu Gln Asn Asn Gln Ile Asn Asn Ala
                 85                  90                  95

Gly Ile Pro Gln Asp Leu Lys Thr Lys Val Asn Val Gln Val Ile Tyr
            100                 105                 110

Leu Tyr Glu Asn Asp Leu Asp Glu Phe Pro Ile Asn Leu Pro Arg Ser
        115                 120                 125

Leu Arg Glu Leu His Leu Gln Asp Asn Asn Val Arg Thr Ile Ala Arg
    130                 135                 140

Asp Ser Leu Ala Arg Ile Pro Leu Leu Glu Lys Leu His Leu Asp Asp
145                 150                 155                 160

Asn Ser Val Ser Thr Val Ser Ile Glu Glu Asp Ala Phe Ala Asp Ser
                165                 170                 175

Lys Gln Leu Lys Leu Leu Phe Leu Ser Arg Asn His Leu Ser Ser Ile
            180                 185                 190

Pro Ser Gly Leu Pro His Thr Leu Glu Glu Leu Arg Leu Asp Asp Asn
        195                 200                 205

Arg Ile Ser Thr Ile Pro Leu His Ala Phe Lys Gly Leu Asn Ser Leu
    210                 215                 220

Arg Arg Leu Val Leu Asp Gly Asn Leu Leu Ala Asn Gln Arg Ile Ala
225                 230                 235                 240

Asp Asp Thr Phe Ser Arg Leu Gln Asn Leu Thr Glu Leu Ser Leu Val
                245                 250                 255

Arg Asn Ser Leu Ala Ala Pro Pro Leu Asn Leu Pro Ser Ala His Leu
            260                 265                 270

Gln Lys Leu Tyr Leu Gln Asp Asn Ala Ile Ser His Ile Pro Tyr Asn
        275                 280                 285

Thr Leu Ala Lys Met Arg Glu Leu Glu Arg Leu Asp Leu Ser Asn Asn
    290                 295                 300

Asn Leu Thr Thr Leu Pro Arg Gly Leu Phe Asp Asp Leu Gly Asn Leu
305                 310                 315                 320

Ala Gln Leu Leu Leu Arg Asn Asn Pro Trp Phe Cys Gly Cys Asn Leu
                325                 330                 335

Met Trp Leu Arg Asp Trp Val Lys Ala Arg Ala Ala Val Val Asn Val
            340                 345                 350

Arg Gly Leu Met Cys Gln Gly Pro Glu Lys Val Arg Gly Met Ala Ile
        355                 360                 365

Lys Asp Ile Thr Ser Glu Met Asp Glu Cys Phe Glu Thr Gly Pro Gln
    370                 375                 380
```

```
Gly Gly Val Ala Asn Ala Ala Ala Lys Thr Thr Ala Ser Asn His Ala
385                 390                 395                 400

Ser Ala Thr Thr Pro Gln Gly Ser Leu Phe Thr Leu Lys Ala Lys Arg
                405                 410                 415

Pro Gly Leu Arg Leu Pro Asp Ser Asn Ile Asp Tyr Pro Met Ala Thr
            420                 425                 430

Gly Asp Gly Ala Lys Thr Leu Ala Ile His Val Lys Ala Leu Thr Ala
        435                 440                 445

Asp Ser Ile Arg Ile Thr Trp Lys Ala Thr Leu Pro Ala Ser Ser Phe
    450                 455                 460

Arg Leu Ser Trp Leu Arg Leu Gly His Ser Pro Ala Val Gly Ser Ile
465                 470                 475                 480

Thr Glu Thr Leu Val Gln Gly Asp Lys Thr Glu Tyr Leu Leu Thr Ala
                485                 490                 495

Leu Glu Pro Lys Ser Thr Tyr Ile Ile Cys Met Val Thr Met Glu Thr
            500                 505                 510

Ser Asn Ala Tyr Val Ala Asp Glu Thr Pro Val Cys Ala Lys Ala Glu
        515                 520                 525

Thr Ala Asp Ser Tyr Gly Pro Thr Thr Thr Leu Asn Gln Glu Gln Asn
    530                 535                 540

Ala Gly Pro Met Ala Ser Leu Pro Leu Ala Gly Ile Ile Gly Gly Ala
545                 550                 555                 560

Val Ala Leu Val Phe Leu Phe Leu Val Leu Gly Ala Ile Cys Trp Tyr
                565                 570                 575

Val His Gln Ala Gly Glu Leu Leu Thr Arg Glu Arg Ala Tyr Asn Arg
            580                 585                 590

Gly Ser Arg Glu Lys Asp Asp Tyr Met Glu Ser Gly Thr Lys Lys Asp
        595                 600                 605

Asn Ser Ile Leu Glu Ile Arg Gly Pro Gly Leu Gln Met Leu Pro Ile
    610                 615                 620

Asn Pro Tyr Arg Ala Lys Glu Glu Tyr Val Val His Thr Ile Phe Pro
625                 630                 635                 640

Ser Asn Gly Ser Ser Leu Cys Lys Ala Thr His Thr Ile Gly Tyr Gly
                645                 650                 655

Thr Thr Arg Gly Tyr Arg Asp Gly Gly Ile Pro Asp Ile Asp Tyr Ser
            660                 665                 670

Tyr Thr
```

<210> 60
<211> 674
<212> PRT
<213> Homo sapiens

<400> 60
Met Val Val Ala His Pro Thr Ala Thr Ala Thr Thr Thr Pro Thr Ala
1 5 10 15

Thr Val Thr Ala Thr Val Val Met Thr Thr Ala Thr Met Asp Leu Arg
20 25 30

Asp Trp Leu Phe Leu Cys Tyr Gly Leu Ile Ala Phe Leu Thr Glu Val
35 40 45

Ile Asp Ser Thr Thr Cys Pro Ser Val Cys Arg Cys Asp Asn Gly Phe
50 55 60

Ile Tyr Cys Asn Asp Arg Gly Leu Thr Ser Ile Pro Ala Asp Ile Pro
65 70 75 80

Asp Asp Ala Thr Thr Leu Tyr Leu Gln Asn Asn Gln Ile Asn Asn Ala
85 90 95

Gly Ile Pro Gln Asp Leu Lys Thr Lys Val Asn Val Gln Val Ile Tyr
100 105 110

Leu Tyr Glu Asn Asp Leu Asp Glu Phe Pro Ile Asn Leu Pro Arg Ser
115 120 125

Leu Arg Glu Leu His Leu Gln Asp Asn Asn Val Arg Thr Ile Ala Arg
130 135 140

Asp Ser Leu Ala Arg Ile Pro Leu Leu Glu Lys Leu His Leu Asp Asp
145 150 155 160

Asn Ser Val Ser Thr Val Ser Ile Glu Glu Asp Ala Phe Ala Asp Ser
165 170 175

Lys Gln Leu Lys Leu Leu Phe Leu Ser Arg Asn His Leu Ser Ser Ile
180 185 190

Pro Ser Gly Leu Pro His Thr Leu Glu Glu Leu Arg Leu Asp Asp Asn
195 200 205

Arg Ile Ser Thr Ile Pro Leu His Ala Phe Lys Gly Leu Asn Ser Leu
210 215 220

Arg Arg Leu Val Leu Asp Gly Asn Leu Leu Ala Asn Gln Arg Ile Ala
225 230 235 240

Asp Asp Thr Phe Ser Arg Leu Gln Asn Leu Thr Glu Leu Ser Leu Val
245 250 255

Arg Asn Ser Leu Ala Ala Pro Pro Leu Asn Leu Pro Ser Ala His Leu

```
            260                 265                 270

Gln Lys Leu Tyr Leu Gln Asp Asn Ala Ile Ser His Ile Pro Tyr Asn
        275                 280                 285

Thr Leu Ala Lys Met Arg Glu Leu Glu Arg Leu Asp Leu Ser Asn Asn
    290                 295                 300

Asn Leu Thr Thr Leu Pro Arg Gly Leu Phe Asp Asp Leu Gly Asn Leu
305                 310                 315                 320

Ala Gln Leu Leu Leu Arg Asn Asn Pro Trp Phe Cys Gly Cys Asn Leu
                325                 330                 335

Met Trp Leu Arg Asp Trp Val Lys Ala Arg Ala Ala Val Val Asn Val
            340                 345                 350

Arg Gly Leu Met Cys Gln Gly Pro Glu Lys Val Arg Gly Met Ala Ile
        355                 360                 365

Lys Asp Ile Thr Ser Glu Met Asp Glu Cys Phe Glu Thr Gly Pro Gln
    370                 375                 380

Gly Gly Val Ala Asn Ala Ala Ala Lys Thr Thr Ala Ser Asn His Ala
385                 390                 395                 400

Ser Ala Thr Thr Pro Gln Gly Ser Leu Phe Thr Leu Lys Ala Lys Arg
                405                 410                 415

Pro Gly Leu Arg Leu Pro Asp Ser Asn Ile Asp Tyr Pro Met Ala Thr
            420                 425                 430

Gly Asp Gly Ala Lys Thr Leu Ala Ile His Val Lys Ala Leu Thr Ala
        435                 440                 445

Asp Ser Ile Arg Ile Thr Trp Lys Ala Thr Leu Pro Ala Ser Ser Phe
    450                 455                 460

Arg Leu Ser Trp Leu Arg Leu Gly His Ser Pro Ala Val Gly Ser Ile
465                 470                 475                 480

Thr Glu Thr Leu Val Gln Gly Asp Lys Thr Glu Tyr Leu Leu Thr Ala
                485                 490                 495

Leu Glu Pro Lys Ser Thr Tyr Ile Ile Cys Met Val Thr Met Glu Thr
            500                 505                 510

Ser Asn Ala Tyr Val Ala Asp Glu Thr Pro Val Cys Ala Lys Ala Glu
        515                 520                 525

Thr Ala Asp Ser Tyr Gly Pro Thr Thr Thr Leu Asn Gln Glu Gln Asn
    530                 535                 540

Ala Gly Pro Met Ala Ser Leu Pro Leu Ala Gly Ile Ile Gly Gly Ala
545                 550                 555                 560

Val Ala Leu Val Phe Leu Phe Leu Val Leu Gly Ala Ile Cys Trp Tyr
```

```
                565                 570                 575

Val His Gln Ala Gly Glu Leu Leu Thr Arg Glu Arg Ala Tyr Asn Arg
            580                 585                 590

Gly Ser Arg Glu Lys Asp Asp Tyr Met Glu Ser Gly Thr Lys Lys Asp
        595                 600                 605

Asn Ser Ile Leu Glu Ile Arg Gly Pro Gly Leu Gln Met Leu Pro Ile
    610                 615                 620

Asn Pro Tyr Arg Ala Lys Glu Glu Tyr Val Val His Thr Ile Phe Pro
625                 630                 635                 640

Ser Asn Gly Ser Ser Leu Cys Lys Ala Thr His Thr Ile Gly Tyr Gly
                645                 650                 655

Thr Thr Arg Gly Tyr Arg Asp Gly Gly Ile Pro Asp Ile Asp Tyr Ser
            660                 665                 670

Tyr Thr
```

<210> 61
<211> 246
<212> PRT
<213> Homo sapiens

<400> 61

```
Pro Met Ala Thr Gly Asp Gly Ala Lys Thr Leu Ala Ile His Val Lys
  1               5                  10                  15

Ala Leu Thr Ala Asp Ser Ile Arg Ile Thr Trp Lys Ala Thr Leu Pro
             20                  25                  30

Ala Ser Ser Phe Arg Leu Ser Trp Leu Arg Leu Gly His Ser Pro Ala
         35                  40                  45

Val Gly Ser Ile Thr Glu Thr Leu Val Gln Gly Asp Lys Thr Glu Tyr
     50                  55                  60

Leu Leu Thr Ala Leu Glu Pro Lys Ser Thr Tyr Ile Ile Cys Met Val
 65                  70                  75                  80

Thr Met Glu Thr Ser Asn Ala Tyr Val Ala Asp Glu Thr Pro Val Cys
                 85                  90                  95

Ala Lys Ala Glu Thr Ala Asp Ser Tyr Gly Pro Thr Thr Thr Leu Asn
            100                 105                 110

Gln Glu Gln Asn Ala Gly Pro Met Ala Ser Leu Pro Leu Ala Gly Ile
        115                 120                 125

Ile Gly Gly Ala Val Ala Leu Val Phe Leu Phe Leu Val Leu Gly Ala
    130                 135                 140
```

```
Ile Cys Trp Tyr Val His Gln Ala Gly Glu Leu Leu Thr Arg Glu Arg
145                 150                 155                 160

Ala Tyr Asn Arg Gly Ser Arg Lys Lys Asp Asp Tyr Met Glu Ser Gly
                165                 170                 175

Thr Lys Lys Asp Asn Ser Ile Leu Glu Ile Arg Gly Pro Gly Leu Gln
            180                 185                 190

Met Leu Pro Ile Asn Pro Tyr Arg Ala Lys Glu Glu Tyr Val Val His
        195                 200                 205

Thr Ile Phe Pro Ser Asn Gly Ser Ser Leu Cys Lys Ala Thr His Thr
    210                 215                 220

Ile Gly Tyr Gly Thr Thr Arg Gly Tyr Arg Asp Gly Gly Ile Pro Asp
225                 230                 235                 240

Ile Asp Tyr Ser Tyr Thr
                245
```

<210> 62
<211> 378
<212> PRT
<213> Homo sapiens

<400> 62

```
Gly Cys Gly Cys Gly Cys Gly Gly Cys Gly Ala Ala Gly Thr Gly Ala
  1               5                  10                  15

Ala Thr Thr Thr Gly Cys Thr Gly Gly Ala Cys Ala Cys Gly Thr Cys
            20                  25                  30

Gly Ala Cys Cys Ala Thr Cys Cys Ala Cys Gly Gly Gly Gly Ala Cys
        35                  40                  45

Thr Gly Gly Gly Gly Cys Thr Gly Gly Cys Thr Cys Ala Cys Gly Thr
    50                  55                  60

Ala Thr Cys Cys Gly Gly Cys Thr Cys Ala Thr Gly Gly Gly Thr Gly
65                  70                  75                  80

Gly Gly Ala Cys Thr Cys Cys Ala Thr Cys Ala Ala Cys Gly Ala Gly
                85                  90                  95

Gly Thr Gly Gly Ala Cys Gly Ala Gly Thr Cys Cys Thr Thr Cys Cys
            100                 105                 110

Ala Gly Cys Cys Cys Ala Thr Cys Cys Ala Cys Ala Cys Gly Thr Ala
        115                 120                 125

Cys Cys Ala Gly Gly Thr Thr Thr Gly Cys Ala Ala Cys Gly Thr Cys
    130                 135                 140

Ala Thr Gly Ala Gly Cys Cys Cys Cys Ala Ala Cys Cys Ala Gly Ala
145                 150                 155                 160
```

```
Ala Cys Ala Ala Cys Thr Gly Gly Cys Thr Gly Cys Gly Cys Ala Cys
                165                 170                 175

Gly Ala Gly Cys Thr Gly Gly Gly Thr Cys Cys Cys Cys Cys Gly Ala
            180                 185                 190

Gly Ala Cys Gly Gly Cys Gly Cys Cys Cys Gly Gly Cys Gly Cys Gly
        195                 200                 205

Thr Cys Thr Ala Thr Gly Cys Thr Gly Ala Gly Ala Thr Cys Ala Ala
    210                 215                 220

Gly Thr Thr Thr Ala Cys Cys Cys Thr Gly Cys Gly Cys Gly Ala Cys
225                 230                 235                 240

Thr Gly Cys Ala Ala Cys Ala Gly Cys Ala Thr Gly Cys Cys Thr Gly
                245                 250                 255

Gly Thr Gly Thr Gly Cys Thr Gly Gly Gly Cys Ala Cys Cys Thr Gly
            260                 265                 270

Cys Ala Ala Gly Gly Ala Gly Ala Cys Cys Thr Thr Cys Ala Ala Cys
        275                 280                 285

Cys Thr Cys Thr Ala Cys Thr Ala Cys Cys Thr Gly Gly Ala Gly Thr
    290                 295                 300

Cys Gly Gly Ala Cys Cys Gly Cys Gly Ala Cys Cys Thr Gly Gly Gly
305                 310                 315                 320

Gly Gly Cys Cys Ala Gly Cys Ala Cys Ala Cys Ala Ala Gly Ala Ala
                325                 330                 335

Ala Gly Cys Cys Ala Gly Thr Thr Cys Cys Thr Cys Ala Ala Ala Ala
            340                 345                 350

Thr Cys Gly Ala Cys Ala Cys Cys Ala Thr Thr Gly Cys Gly Gly Cys
        355                 360                 365

Cys Gly Ala Cys Gly Ala Gly Ala Gly Cys Thr Thr Cys Ala Cys Ala
    370                 375                 380

Gly Gly Thr Gly Cys Cys Gly Ala Cys Cys Thr Thr Gly Gly Thr Gly
385                 390                 395                 400

Thr Gly Cys Gly Gly Cys Gly Thr Cys Thr Cys Ala Ala Gly Cys Thr
                405                 410                 415

Cys Ala Ala Cys Ala Cys Gly Gly Ala Gly Gly Thr Gly Cys Gly Cys
            420                 425                 430

Ala Gly Thr Gly Thr Gly Gly Gly Thr Cys Cys Cys Cys Thr Cys Ala
        435                 440                 445

Gly Cys Ala Ala Gly Cys Gly Cys Gly Gly Cys Thr Thr Cys Thr Ala
    450                 455                 460
```

```
Cys Cys Thr Gly Gly Cys Cys Thr Thr Cys Cys Ala Gly Gly Ala Cys
465                 470                 475                 480

Ala Thr Ala Gly Gly Thr Gly Cys Cys Thr Gly Cys Cys Thr Gly Gly
                485                 490                 495

Cys Cys Ala Thr Cys Cys Thr Cys Thr Cys Thr Cys Thr Cys Cys Gly
            500                 505                 510

Cys Ala Thr Cys Thr Ala Cys Thr Ala Thr Ala Ala Gly Ala Ala Gly
        515                 520                 525

Thr Gly Cys Cys Cys Thr Gly Cys Cys Ala Thr Gly Gly Thr Gly Cys
    530                 535                 540

Gly Cys Ala Ala Thr Cys Thr Gly Gly Cys Thr Gly Cys Cys Thr Thr
545                 550                 555                 560

Cys Thr Cys Gly Gly Ala Gly Gly Cys Ala Gly Thr Gly Ala Cys Gly
                565                 570                 575

Gly Gly Gly Gly Cys Cys Gly Ala Cys Thr Cys Gly Thr Cys Cys Thr
            580                 585                 590

Cys Ala Cys Thr Gly Gly Thr Gly Gly Ala Gly Gly Thr Gly Ala Gly
        595                 600                 605

Gly Gly Gly Cys Cys Ala Gly Thr Gly Cys Gly Thr Gly Cys Gly Gly
    610                 615                 620

Cys Ala Cys Thr Cys Ala Gly Ala Gly Gly Ala Gly Cys Gly Gly Gly
625                 630                 635                 640

Ala Cys Ala Cys Ala Cys Cys Cys Ala Ala Gly Ala Thr Gly Thr Ala
                645                 650                 655

Cys Thr Gly Cys Ala Gly Cys Gly Cys Gly Gly Ala Gly Gly Gly Cys
            660                 665                 670

Gly Ala Gly Thr Gly Gly Cys Thr Cys Gly Thr Gly Cys Cys Cys Ala
        675                 680                 685

Thr Cys Gly Gly Cys Ala Ala Ala Thr Gly Cys Gly Thr Gly Thr Gly
    690                 695                 700

Cys Ala Gly Thr Gly Cys Cys Gly Gly Cys Thr Ala Cys Gly Ala Gly
705                 710                 715                 720

Gly Ala Gly Cys Gly Gly Cys Gly Gly Gly Ala Thr Gly Cys Cys Thr
                725                 730                 735

Gly Thr Gly Thr Gly Gly Cys Cys Thr Gly Thr Gly Ala Gly Cys Thr
            740                 745                 750

Gly Gly Gly Cys Thr Thr Cys Thr Ala Cys Ala Ala Gly Thr Cys Ala
        755                 760                 765
```

```
Gly Cys Cys Cys Cys Thr Gly Gly Gly Gly Ala Cys Cys Ala Gly Cys
    770                 775                 780

Thr Gly Thr Gly Thr Gly Cys Cys Cys Gly Cys Thr Gly Cys Cys Cys
785                 790                 795                 800

Thr Cys Cys Cys Cys Ala Cys Ala Gly Cys Cys Ala Cys Thr Cys Cys
                805                 810                 815

Gly Cys Ala Gly Cys Thr Cys Cys Ala Gly Cys Cys Gly Cys Cys Cys
            820                 825                 830

Ala Ala Gly Cys Cys Thr Gly Cys Cys Ala Cys Thr Gly Thr Gly Ala
        835                 840                 845

Cys Cys Thr Cys Ala Gly Cys Thr Ala Cys Thr Ala Cys Cys Gly Thr
    850                 855                 860

Gly Cys Ala Gly Cys Cys Cys Thr Gly Gly Ala Cys Cys Cys Gly Cys
865                 870                 875                 880

Cys Gly Thr Cys Cys Thr Cys Ala Gly Cys Cys Thr Gly Cys Ala Cys
                885                 890                 895

Cys Cys Gly Gly Cys Cys Ala Cys Cys Cys Thr Cys Gly Gly Cys Ala
            900                 905                 910

Cys Cys Ala Gly Thr Gly Ala Ala Cys Cys Thr Gly Ala Thr Cys Thr
        915                 920                 925

Cys Cys Ala Gly Thr Gly Thr Gly Ala Ala Thr Gly Gly Gly Ala Cys
    930                 935                 940

Ala Thr Cys Ala Gly Thr Gly Ala Cys Thr Cys Thr Gly Gly Ala Gly
945                 950                 955                 960

Thr Gly Gly Gly Cys Cys Cys Cys Thr Cys Cys Cys Cys Thr Gly Gly
                965                 970                 975

Ala Cys Cys Cys Ala Gly Gly Thr Gly Gly Cys Cys Gly Cys Ala Gly
            980                 985                 990

Thr Gly Ala Cys Ala Thr Cys Ala Cys Cys Thr Ala Cys Ala Ala Thr
        995                1000                1005

Gly Cys Cys Gly Thr Gly Thr Gly Cys Cys Gly Cys
   1010                1015                1020


<210> 63
<211> 338
<212> PRT
<213> Gallus gallus

<400> 63
Ala Arg Gly Glu Val Asn Leu Leu Asp Thr Ser Thr Ile His Gly Asp
```

```
  1               5                  10                  15

Trp Gly Trp Leu Thr Tyr Pro Ala His Gly Trp Asp Ser Ile Asn Glu
            20                  25                  30

Val Asp Glu Ser Phe Gln Pro Ile His Thr Tyr Gln Val Cys Asn Val
        35                  40                  45

Met Ser Pro Asn Gln Asn Asn Trp Leu Arg Thr Ser Trp Val Pro Arg
    50                  55                  60

Asp Gly Ala Arg Arg Val Tyr Ala Glu Ile Lys Phe Thr Leu Arg Asp
65                  70                  75                  80

Cys Asn Ser Met Pro Gly Val Leu Gly Thr Cys Lys Glu Thr Phe Asn
                85                  90                  95

Leu Tyr Tyr Leu Glu Ser Asp Arg Asp Leu Gly Ala Ser Thr Gln Glu
            100                 105                 110

Ser Gln Phe Leu Lys Ile Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr
        115                 120                 125

Gly Ala Asp Leu Gly Val Arg Arg Leu Lys Leu Asn Thr Glu Val Arg
    130                 135                 140

Ser Val Gly Pro Leu Ser Lys Arg Gly Phe Tyr Leu Ala Phe Gln Asp
145                 150                 155                 160

Ile Gly Ala Cys Leu Ala Ile Leu Ser Leu Arg Ile Tyr Tyr Lys Lys
                165                 170                 175

Cys Pro Ala Met Val Arg Asn Leu Ala Ala Phe Ser Glu Ala Val Thr
            180                 185                 190

Gly Ala Asp Ser Ser Ser Leu Val Glu Val Arg Gly Gln Cys Val Arg
        195                 200                 205

His Ser Glu Glu Arg Asp Thr Pro Lys Met Tyr Cys Ser Ala Glu Gly
    210                 215                 220

Glu Trp Leu Val Pro Ile Gly Lys Cys Val Cys Ser Ala Gly Tyr Glu
225                 230                 235                 240

Glu Arg Arg Asp Ala Cys Val Ala Cys Glu Leu Gly Phe Tyr Lys Ser
                245                 250                 255

Ala Pro Gly Asp Gln Leu Cys Ala Arg Cys Pro Pro His Ser His Ser
            260                 265                 270

Ala Ala Pro Ala Ala Gln Ala Cys His Cys Asp Leu Ser Tyr Tyr Arg
        275                 280                 285

Ala Ala Leu Asp Pro Pro Ser Ser Ala Cys Thr Arg Pro Pro Ser Ala
    290                 295                 300

Pro Val Asn Leu Ile Ser Ser Val Asn Gly Thr Ser Val Thr Leu Glu
```

```
305                 310                 315                 320

Trp Ala Pro Pro Leu Asp Pro Gly Gly Arg Ser Asp Ile Thr Tyr Asn
                325                 330                 335

Ala Val Cys Arg Arg Cys Pro Trp Ala Leu Ser Arg Cys Glu Ala Cys
            340                 345                 350

Gly Ser Gly Thr Arg Phe Val Pro Gln Gln Thr Ser Leu Val Gln Ala
        355                 360                 365

Ser Leu Leu Val Ala Asn Leu Leu Ala His Met Asn Tyr Ser Phe Trp
    370                 375                 380

Ile Glu Ala Val Asn Gly Val Ser Asp Leu Ser Pro Glu Pro Arg Arg
385                 390                 395                 400

Ala Ala Val Val Asn Ile Thr Thr Asn Gln Ala Ala Pro Ser Gln Val
                405                 410                 415

Val Val Ile Arg Gln Glu Arg Ala Gly Gln Thr Ser Val Ser Leu Leu
            420                 425                 430

Trp Gln Glu Pro Glu Gln Pro Asn Gly Ile Ile Leu Glu Tyr Glu Ile
        435                 440                 445

Lys Tyr Tyr Glu Lys Asp Lys Glu Met Gln Ser Tyr Ser Thr Leu Lys
    450                 455                 460

Ala Val Thr Thr Arg Ala Thr Val Ser Gly Leu Lys Pro Gly Thr Arg
465                 470                 475                 480

Tyr Val Phe Gln Val Arg Ala Arg Thr Ser Ala Gly Cys Gly Arg Phe
                485                 490                 495

Ser Gln Ala Met Glu Val Glu Thr Gly Lys Pro Arg Pro Arg Tyr Asp
            500                 505                 510

Thr Arg Thr
        515
```

<210> 64
<211> 326
<212> PRT
<213> Bos taurus

<400> 64

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Ala Thr Gly Gly Thr Gly Gly Thr Gly Gly Cys Ala Cys Ala Cys Cys
  1               5                  10                  15

Cys Cys Ala Cys Cys Gly Cys Cys Ala Cys Thr Gly Cys Cys Ala Cys
             20                  25                  30

Cys Ala Cys Cys Ala Cys Gly Cys Cys Cys Ala Cys Thr Gly Cys Cys
         35                  40                  45
```

```
Ala Cys Thr Gly Thr Cys Ala Cys Gly Gly Cys Cys Ala Cys Cys Gly
     50                  55                  60

Thr Thr Gly Thr Gly Ala Thr Gly Ala Cys Cys Ala Cys Gly Gly Cys
 65                  70                  75                  80

Cys Ala Cys Cys Ala Thr Gly Gly Ala Cys Cys Thr Gly Cys Gly Gly
                 85                  90                  95

Gly Ala Cys Thr Gly Gly Cys Thr Gly Thr Thr Cys Cys Thr Cys Thr
            100                 105                 110

Gly Cys Thr Ala Cys Gly Gly Gly Cys Thr Cys Ala Thr Cys Gly Cys
        115                 120                 125

Cys Thr Thr Cys Cys Thr Gly Ala Cys Gly Gly Ala Gly Gly Thr Cys
    130                 135                 140

Ala Thr Cys Gly Ala Cys Ala Gly Cys Ala Cys Cys Ala Cys Cys Thr
145                 150                 155                 160

Gly Cys Cys Cys Cys Thr Cys Gly Gly Thr Gly Thr Gly Cys Cys Gly
                165                 170                 175

Cys Thr Gly Cys Gly Ala Cys Ala Ala Cys Gly Gly Cys Thr Thr Cys
            180                 185                 190

Ala Thr Cys Thr Ala Cys Thr Gly Cys Ala Ala Cys Gly Ala Cys Cys
        195                 200                 205

Gly Gly Gly Gly Ala Cys Thr Cys Ala Cys Ala Thr Cys Cys Ala Thr
    210                 215                 220

Cys Cys Cys Cys Gly Cys Ala Gly Ala Thr Ala Thr Cys Cys Cys Thr
225                 230                 235                 240

Gly Ala Thr Gly Ala Thr Gly Cys Cys Ala Cys Cys Ala Cys Cys Cys
                245                 250                 255

Thr Cys Thr Ala Cys Cys Thr Gly Cys Ala Gly Ala Ala Cys Ala Ala
            260                 265                 270

Cys Cys Ala Gly Ala Thr Cys Ala Ala Cys Ala Ala Cys Gly Cys Cys
        275                 280                 285

Gly Gly Cys Ala Thr Cys Cys Cys Cys Cys Ala Gly Gly Ala Cys Cys
    290                 295                 300

Thr Cys Ala Ala Gly Ala Cys Cys Ala Ala Gly Gly Thr Cys Ala Ala
305                 310                 315                 320

Cys Gly Thr Gly Cys Ala Gly Gly Thr Cys Ala Thr Cys Thr Ala Cys
                325                 330                 335

Cys Thr Ala Thr Ala Cys Gly Ala Gly Ala Ala Thr Gly Ala Cys Cys
            340                 345                 350
```

```
Thr Gly Gly Ala Thr Gly Ala Gly Thr Thr Cys Cys Cys Cys Ala Thr
        355                 360                 365

Cys Ala Ala Cys Cys Thr Gly Cys Cys Cys Cys Gly Cys Thr Cys Cys
    370                 375                 380

Cys Thr Cys Cys Gly Gly Gly Ala Gly Cys Thr Gly Cys Ala Cys Cys
385                 390                 395                 400

Thr Gly Cys Ala Gly Gly Ala Cys Ala Ala Cys Ala Ala Thr Gly Thr
                405                 410                 415

Gly Cys Gly Cys Ala Cys Cys Ala Thr Thr Gly Cys Cys Ala Gly Gly
            420                 425                 430

Gly Ala Cys Thr Cys Gly Cys Thr Gly Gly Cys Cys Cys Gly Cys Ala
        435                 440                 445

Thr Cys Cys Cys Gly Cys Thr Gly Cys Thr Gly Gly Ala Gly Ala Ala
    450                 455                 460

Gly Cys Thr Gly Cys Ala Cys Cys Thr Gly Gly Ala Thr Gly Ala Cys
465                 470                 475                 480

Ala Ala Cys Thr Cys Cys Gly Thr Gly Thr Cys Cys Ala Cys Cys Gly
                485                 490                 495

Thr Cys Ala Gly Cys Ala Thr Thr Gly Ala Gly Gly Ala Gly Gly Ala
            500                 505                 510

Cys Gly Cys Cys Thr Thr Cys Gly Cys Cys Gly Ala Cys Ala Gly Cys
        515                 520                 525

Ala Ala Ala Cys Ala Gly Cys Thr Cys Ala Ala Gly Cys Thr Gly Cys
    530                 535                 540

Thr Cys Thr Thr Cys Cys Thr Gly Ala Gly Cys Cys Gly Gly Ala Ala
545                 550                 555                 560

Cys Cys Ala Cys Cys Thr Gly Ala Gly Cys Ala Gly Cys Ala Thr Cys
                565                 570                 575

Cys Cys Cys Thr Cys Gly Gly Gly Gly Cys Thr Gly Cys Cys Gly Cys
            580                 585                 590

Ala Cys Ala Cys Gly Cys Thr Gly Gly Ala Gly Gly Ala Gly Cys Thr
        595                 600                 605

Gly Cys Gly Gly Cys Thr Gly Gly Ala Thr Gly Ala Cys Ala Ala Cys
    610                 615                 620

Cys Gly Cys Ala Thr Cys Thr Cys Cys Ala Cys Cys Ala Thr Cys Cys
625                 630                 635                 640

Cys Gly Cys Thr Gly Cys Ala Thr Gly Cys Cys Thr Thr Cys Ala Ala
                645                 650                 655
```

```
Gly Gly Gly Cys Cys Thr Cys Ala Ala Cys Ala Gly Cys Cys Thr Gly
            660                 665                 670

Cys Gly Gly Cys Gly Cys Cys Thr Gly Gly Thr Gly Cys Thr Gly Gly
        675                 680                 685

Ala Cys Gly Gly Thr Ala Ala Cys Cys Thr Gly Cys Thr Gly Gly Cys
    690                 695                 700

Cys Ala Ala Cys Cys Ala Gly Cys Gly Cys Ala Thr Cys Gly Cys Cys
705                 710                 715                 720

Gly Ala Cys Gly Ala Cys Ala Cys Cys Thr Thr Cys Ala Gly Cys Cys
                725                 730                 735

Gly Cys Cys Thr Ala Cys Ala Gly Ala Ala Cys Cys Thr Cys Ala Cys
            740                 745                 750

Ala Gly Ala Gly Cys Thr Cys Thr Cys Gly Cys Thr Gly Gly Thr Gly
        755                 760                 765

Cys Gly Cys Ala Ala Thr Thr Cys Gly Cys Thr Gly Gly Cys Cys Gly
    770                 775                 780

Cys Gly Cys Cys Ala Cys Cys Cys Cys Thr Cys Thr Ala Cys Cys Thr
785                 790                 795                 800

Gly Cys Ala Gly Gly Ala Cys Ala Ala Thr Gly Cys Cys Ala Thr Cys
                805                 810                 815

Ala Gly Cys Cys Ala Cys Ala Thr Cys Cys Cys Cys Thr Ala Cys Ala
            820                 825                 830

Ala Cys Ala Cys Gly Cys Thr Gly Gly Cys Cys Ala Ala Gly Ala Thr
        835                 840                 845

Gly Cys Gly Thr Gly Ala Gly Cys Thr Gly Gly Ala Gly Cys Gly Gly
    850                 855                 860

Cys Thr Gly Gly Ala Cys Cys Thr Gly Thr Cys Cys Ala Ala Cys Ala
865                 870                 875                 880

Ala Cys Ala Ala Cys Cys Thr Gly Ala Cys Cys Ala Cys Gly Cys Thr
                885                 890                 895

Gly Cys Cys Cys Cys Gly Cys Gly Gly Cys Cys Thr Gly Thr Thr Cys
            900                 905                 910

Gly Ala Cys Gly Ala Cys Cys Thr Gly Gly Gly Gly Ala Ala Cys Cys
        915                 920                 925

Thr Gly Gly Cys Cys Cys Ala Gly Cys Thr Gly Cys Thr Gly Cys Thr
    930                 935                 940

Cys Ala Gly Gly Ala Ala Cys Ala Ala Cys Cys Cys Thr Thr Gly Gly
945                 950                 955                 960
```

```
Thr Thr Thr Thr Gly Thr Gly Gly Cys Thr Gly Cys Ala Ala Cys Cys
                965                 970                 975

Thr Cys Ala Thr Gly Thr Gly Gly Cys Thr Gly Cys Gly Gly Gly Ala
            980                 985                 990

Cys Thr Gly Gly Gly Thr Gly Ala Ala Gly Gly Cys Ala Cys Gly Gly
        995                1000                1005

Gly Cys Gly Gly Cys Cys Gly Thr Gly Gly Thr Cys Ala Ala Cys Gly
   1010                1015                1020

Thr Gly Cys Gly Gly Gly Gly Cys Cys Thr Cys Ala Thr Gly Thr Gly
1025                1030                1035                1040

Cys Cys Ala Gly Gly Gly Cys Cys Cys Thr Gly Ala Gly Ala Ala Gly
               1045                1050                1055

Gly Thr Cys Cys Gly Gly Gly Gly Cys Ala Thr Gly Gly Cys Cys Ala
           1060                1065                1070

Thr Cys Ala Ala Gly Gly Ala Cys Ala Thr Thr Ala Cys Cys Ala Gly
       1075                1080                1085

Cys Gly Ala Gly Gly Thr Gly Gly Ala Gly Ala Gly Thr Gly Thr Thr
   1090                1095                1100

Thr Thr Gly Ala Gly Ala Cys Gly Gly Gly Cys Gly Cys Cys Gly Cys
1105                1110                1115                1120

Ala Gly Gly Gly Cys Gly Gly Cys Gly Thr Gly Gly Cys Cys Ala Ala
               1125                1130                1135

Thr Gly Cys Gly Gly Cys Thr Gly Cys Cys Ala Ala Gly Ala Cys Cys
           1140                1145                1150

Ala Cys Gly Gly Cys Cys Ala Gly Cys Ala Ala Cys Cys Ala Cys Gly
       1155                1160                1165

Cys Cys Thr Cys Thr Gly Cys Cys Ala Cys Cys Ala Cys Gly Cys Cys
   1170                1175                1180

Cys Cys Ala Gly Gly Gly Thr Thr Cys Cys Cys Thr Gly Thr Thr Thr
1185                1190                1195                1200

Ala Cys Cys Cys Thr Cys Ala Ala Gly Gly Cys Cys Ala Ala Ala Ala
               1205                1210                1215

Gly Gly Cys Cys Ala Gly Gly Gly Cys Thr Gly Cys Gly Cys Cys Thr
           1220                1225                1230

Cys Cys Cys Cys Gly Ala Cys Thr Cys Cys Ala Ala Cys Ala Thr Thr
       1235                1240                1245

Gly Ala Cys Thr Ala Cys Cys Cys Cys Ala Thr Gly Gly Cys Cys Ala
   1250                1255                1260
```

Cys Gly Gly Gly Thr Gly Ala Thr Gly Gly Cys Gly Cys Cys Ala Ala
1265 1270 1275 1280

Gly Ala Cys Cys Cys Thr Gly Gly Cys Cys Ala Thr Cys Cys Ala Cys
1285 1290 1295

Gly Thr Gly Ala Ala Gly Gly Cys Cys Cys Thr Gly Ala Cys Gly Gly
1300 1305 1310

Cys Ala Gly Ala Cys Thr Cys Cys Ala Thr Cys Cys Gly Cys Ala Thr
1315 1320 1325

Cys Ala Cys Gly Thr Gly Gly Ala Ala Gly Gly Cys Cys Ala Cys Gly
1330 1335 1340

Cys Thr Cys Cys Cys Cys Gly Cys Cys Thr Cys Cys Thr Cys Thr Thr
1345 1350 1355 1360

Thr Cys Cys Gly Gly Cys Thr Cys Ala Gly Thr Thr Gly Gly Cys Thr
1365 1370 1375

Gly Cys Gly Cys Cys Thr Gly Gly Gly Cys Cys Ala Cys Ala Gly Cys
1380 1385 1390

Cys Cys Ala Gly Cys Cys Gly Thr Gly Gly Gly Cys Thr Cys Cys Ala
1395 1400 1405

Thr Cys Ala Cys Gly Gly Ala Gly Ala Cys Cys Thr Thr Gly Gly Thr
1410 1415 1420

Gly Cys Ala Gly Gly Gly Gly Gly Ala Cys Ala Ala Gly Ala Cys Ala
1425 1430 1435 1440

Gly Ala Gly Thr Ala Cys Cys Thr Gly Cys Thr Gly Ala Cys Ala Gly
1445 1450 1455

Cys Cys Cys Thr Gly Gly Ala Gly Cys Cys Cys Ala Ala Gly Thr Cys
1460 1465 1470

Cys Ala Cys Cys Thr Ala Cys Ala Thr Cys Ala Thr Cys Thr Gly Cys
1475 1480 1485

Ala Thr Gly Gly Thr Cys Ala Cys Cys Ala Thr Gly Gly Ala Gly Ala
1490 1495 1500

Cys Cys Ala Gly Cys Ala Ala Thr Gly Cys Cys Thr Ala Cys Gly Thr
1505 1510 1515 1520

Ala Gly Cys Thr Gly Ala Thr Gly Ala Gly Ala Cys Ala Cys Cys Cys
1525 1530 1535

Gly Thr Gly Thr Gly Thr Gly Cys Cys Ala Ala Gly Gly Cys Ala Gly
1540 1545 1550

Ala Gly Ala Cys Ala Gly Cys Cys Gly Ala Cys Ala Gly Cys Thr Ala
1555 1560 1565

```
Thr Gly Gly Cys Cys Cys Thr Ala Cys Cys Ala Cys Cys Ala Cys Ala
   1570                1575                1580

Cys Thr Cys Ala Ala Cys Cys Ala Gly Gly Ala Gly Cys Ala Gly Ala
1585                1590                1595                1600

Ala Cys Gly Cys Thr Gly Gly Cys Cys Cys Cys Ala Thr Gly Gly Cys
                1605                1610                1615

Gly Ala Gly Cys Cys Thr Gly Cys Cys Cys Cys Thr Gly Gly Cys Gly
            1620                1625                1630

Gly Gly Cys Ala Thr Cys Ala Thr Cys Gly Gly Cys Gly Gly Gly Gly
        1635                1640                1645

Cys Ala Gly Thr Gly Gly Cys Thr Cys Thr Gly Gly Thr Cys Thr Thr
   1650                1655                1660

Cys Cys Thr Cys Thr Thr Cys Cys Thr Gly Gly Thr Cys Cys Thr Gly
1665                1670                1675                1680

Gly Gly Gly Gly Cys Cys Ala Thr Cys Thr Gly Cys Thr Gly Gly Thr
                1685                1690                1695

Ala Cys Gly Thr Gly Cys Ala Cys Cys Ala Gly Gly Cys Thr Gly Gly
            1700                1705                1710

Cys Gly Ala Gly Cys Thr Gly Cys Thr Gly Ala Cys Cys Cys Gly Gly
        1715                1720                1725

Gly Ala Gly Ala Gly Gly Gly Cys Cys Thr Ala Cys Ala Ala Cys Cys
   1730                1735                1740

Gly Gly Gly Gly Cys Ala Gly Cys Ala Gly Gly Ala Ala Ala Ala Ala
1745                1750                1755                1760

Gly Gly Ala Thr Gly Ala Cys Thr Ala Thr Ala Thr Gly Gly Ala Gly
                1765                1770                1775

Thr Cys Ala Gly Gly Gly Ala Cys Cys Ala Ala Gly Ala Ala Gly Gly
            1780                1785                1790

Ala Thr Ala Ala Cys Thr Cys Cys Ala Thr Cys Cys Thr Gly Gly Ala
        1795                1800                1805

Ala Ala Thr Cys Cys Gly Cys Gly Gly Cys Cys Cys Thr Gly Gly Gly
   1810                1815                1820

Cys Thr Gly Cys Ala Gly Ala Thr Gly Cys Thr Gly Cys Cys Cys Ala
1825                1830                1835                1840

Thr Cys Ala Ala Cys Cys Cys Gly Thr Ala Cys Cys Gly Cys Gly Cys
                1845                1850                1855

Cys Ala Ala Ala Gly Ala Ala Gly Ala Gly Thr Ala Cys Gly Thr Gly
            1860                1865                1870
```

```
Gly Thr Cys Cys Ala Cys Ala Cys Thr Ala Thr Cys Thr Thr Cys Cys
       1875                1880                1885

Cys Cys Thr Cys Cys Ala Ala Cys Gly Gly Cys Ala Gly Cys Ala Gly
   1890                1895                1900

Cys Cys Thr Cys Thr Gly Cys Ala Ala Gly Gly Cys Cys Ala Cys Ala
1905                1910                1915                1920

Cys Ala Cys Ala Cys Cys Ala Thr Thr Gly Gly Cys Thr Ala Cys Gly
               1925                1930                1935

Gly Cys Ala Cys Cys Ala Cys Gly Cys Gly Gly Gly Gly Cys Thr Ala
           1940                1945                1950

Cys Cys Gly Gly Gly Ala Cys Gly Gly Cys Gly Gly Cys Ala Thr Cys
       1955                1960                1965

Cys Cys Cys Gly Ala Cys Ala Thr Ala Gly Ala Cys Thr Ala Cys Thr
   1970                1975                1980

Cys Cys Thr Ala Cys Ala Cys Ala
1985                1990
```

<210> 65
<211> 1020
<212> DNA
<213> Homo sapiens

<400> 65
gcgcgcggcg aagtgaattt gctggacacg tcgaccatcc acggggactg gggctggctc 60
acgtatccgg ctcatgggtg ggactccatc aacgaggtgg acgagtcctt ccagcccatc 120
cacacgtacc aggtttgcaa cgtcatgagc cccaaccaga acaactggct gcgcacgagc 180
tgggtccccc gagacggcgc ccggcgcgtc tatgctgaga tcaagtttac cctgcgcgac 240
tgcaacagca tgcctggtgt gctgggcacc tgcaaggaga ccttcaacct ctactacctg 300
gagtcggacc gcgacctggg ggccagcaca caagaaagcc agttcctcaa aatcgacacc 360
attgcggccg acgagagctt cacaggtgcc gaccttggtg tgcggcgtct caagctcaac 420
acggaggtgc gcagtgtggg tcccctcagc aagcgcggct tctacctggc cttccaggac 480
ataggtgcct gcctggccat cctctctctc cgcatctact ataagaagtg ccctgccatg 540
gtgcgcaatc tggctgcctt ctcggaggca gtgacggggg ccgactcgtc ctcactggtg 600
gaggtgaggg gccagtgcgt gcggcactca gaggagcggg acacacccaa gatgtactgc 660
agcgcggagg gcgagtggct cgtgcccatc ggcaaatgcg tgtgcagtgc cggctacgag 720
gagcggcggg atgcctgtgt ggcctgtgag ctgggcttct acaagtcagc ccctggggac 780
cagctgtgtg cccgctgccc tccccacagc cactccgcag ctccagccgc ccaagcctgc 840
cactgtgacc tcagctacta ccgtgcagcc ctggacccgc cgtcctcagc ctgcacccgg 900
ccaccctcgg caccagtgaa cctgatctcc agtgtgaatg ggacatcagt gactctggag 960
tgggcccctc ccctggaccc aggtggccgc agtgacatca cctacaatgc cgtgtgccgc 1020

<210> 66
<211> 515
<212> PRT
<213> Homo sapiens

<400> 66
Ala Arg Gly Glu Val Asn Leu Leu Asp Thr Ser Thr Ile His Gly Asp

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  1               5                  10                  15

Trp Gly Trp Leu Thr Tyr Pro Ala His Gly Trp Asp Ser Ile Asn Glu
            20                  25                  30

Val Asp Glu Ser Phe Gln Pro Ile His Thr Tyr Gln Val Cys Asn Val
        35                  40                  45

Met Ser Pro Asn Gln Asn Asn Trp Leu Arg Thr Ser Trp Val Pro Arg
    50                  55                  60

Asp Gly Ala Arg Arg Val Tyr Ala Glu Ile Lys Phe Thr Leu Arg Asp
65                  70                  75                  80

Cys Asn Ser Met Pro Gly Val Leu Gly Thr Cys Lys Glu Thr Phe Asn
                85                  90                  95

Leu Tyr Tyr Leu Glu Ser Asp Arg Asp Leu Gly Ala Ser Thr Gln Glu
            100                 105                 110

Ser Gln Phe Leu Lys Ile Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr
        115                 120                 125

Gly Ala Asp Leu Gly Val Arg Arg Leu Lys Leu Asn Thr Glu Val Arg
    130                 135                 140

Ser Val Gly Pro Leu Ser Lys Arg Gly Phe Tyr Leu Ala Phe Gln Asp
145                 150                 155                 160

Ile Gly Ala Cys Leu Ala Ile Leu Ser Leu Arg Ile Tyr Tyr Lys Lys
                165                 170                 175

Cys Pro Ala Met Val Arg Asn Leu Ala Ala Phe Ser Glu Ala Val Thr
            180                 185                 190

Gly Ala Asp Ser Ser Ser Leu Val Glu Val Arg Gly Gln Cys Val Arg
        195                 200                 205

His Ser Glu Glu Arg Asp Thr Pro Lys Met Tyr Cys Ser Ala Glu Gly
    210                 215                 220

Glu Trp Leu Val Pro Ile Gly Lys Cys Val Cys Ser Ala Gly Tyr Glu
225                 230                 235                 240

Glu Arg Arg Asp Ala Cys Val Ala Cys Glu Leu Gly Phe Tyr Lys Ser
                245                 250                 255

Ala Pro Gly Asp Gln Leu Cys Ala Arg Cys Pro Pro His Ser His Ser
            260                 265                 270

Ala Ala Pro Ala Ala Gln Ala Cys His Cys Asp Leu Ser Tyr Tyr Arg
        275                 280                 285

Ala Ala Leu Asp Pro Pro Ser Ser Ala Cys Thr Arg Pro Pro Ser Ala
    290                 295                 300

Pro Val Asn Leu Ile Ser Ser Val Asn Gly Thr Ser Val Thr Leu Glu
```

```
305                 310                 315                 320

Trp Ala Pro Pro Leu Asp Pro Gly Gly Arg Ser Asp Ile Thr Tyr Asn
                325                 330                 335

Ala Val Cys Arg Arg Cys Pro Trp Ala Leu Ser Arg Cys Glu Ala Cys
            340                 345                 350

Gly Ser Gly Thr Arg Phe Val Pro Gln Gln Thr Ser Leu Val Gln Ala
        355                 360                 365

Ser Leu Leu Val Ala Asn Leu Leu Ala His Met Asn Tyr Ser Phe Trp
    370                 375                 380

Ile Glu Ala Val Asn Gly Val Ser Asp Leu Ser Pro Glu Pro Arg Arg
385                 390                 395                 400

Ala Ala Val Val Asn Ile Thr Thr Asn Gln Ala Ala Pro Ser Gln Val
                405                 410                 415

Val Val Ile Arg Gln Glu Arg Ala Gly Gln Thr Ser Val Ser Leu Leu
            420                 425                 430

Trp Gln Glu Pro Glu Gln Pro Asn Gly Ile Ile Leu Glu Tyr Glu Ile
        435                 440                 445

Lys Tyr Tyr Glu Lys Asp Lys Glu Met Gln Ser Tyr Ser Thr Leu Lys
    450                 455                 460

Ala Val Thr Thr Arg Ala Thr Val Ser Gly Leu Lys Pro Gly Thr Arg
465                 470                 475                 480

Tyr Val Phe Gln Val Arg Ala Arg Thr Ser Ala Gly Cys Gly Arg Phe
                485                 490                 495

Ser Gln Ala Met Glu Val Glu Thr Gly Lys Pro Arg Pro Arg Tyr Asp
            500                 505                 510

Thr Arg Thr
        515
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<210> 67
<211> 1992
<212> DNA
<213> Homo sapiens

<400> 67
atggtggtgg cacaccccac cgccactgcc accaccacgc ccactgccac tgtcacggcc 60
accgttgtga tgaccacggc caccatggac ctgcgggact ggctgttcct ctgctacggg 120
ctcatcgcct tcctgacgga ggtcatcgac agcaccacct gcccctcggt gtgccgctgc 180
gacaacggct tcatctactg caacgaccgg ggactcacat ccatccccgc agatatccct 240
gatgatgcca ccaccctcta cctgcagaac aaccagatca acaacgccgg catcccccag 300
gacctcaaga ccaaggtcaa cgtgcaggtc atctacctat acgagaatga cctggatgag 360
ttccccatca acctgccccg ctccctccgg gagctgcacc tgcaggacaa caatgtgcgc 420
accattgcca gggactcgct ggcccgcatc ccgctgctgg agaagctgca cctggatgac 480
aactccgtgt ccaccgtcag cattgaggag gacgccttcg ccgacagcaa acagctcaag 540

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ctgctcttcc tgagccggaa ccacctgagc agcatcccct cggggctgcc gcacacgctg 600
gaggagctgc ggctggatga caaccgcatc tccaccatcc cgctgcatgc cttcaagggc 660
ctcaacagcc tgcggcgcct ggtgctggac ggtaacctgc tggccaacca gcgcatcgcc 720
gacgacacct tcagccgcct acagaacctc acagagctct cgctggtgcg caattcgctg 780
gccgcgccac ccctctacct gcaggacaat gccatcagcc acatccccta caacacgctg 840
gccaagatgc gtgagctgga gcggctggac ctgtccaaca acaacctgac cacgctgccc 900
cgcggcctgt tcgacgacct ggggaacctg gcccagctgc tgctcaggaa caacccttgg 960
ttttgtggct gcaacctcat gtggctgcgg gactgggtga aggcacgggc ggccgtggtc 1020
aacgtgcggg gcctcatgtg ccagggccct gagaaggtcc ggggcatggc catcaaggac 1080
attaccagcg aggtggagag tgttttgaga cgggcgccgc agggcggcgt ggccaatgcg 1140
gctgccaaga ccacggccag caaccacgcc tctgccacca cgccccaggg ttccctgttt 1200
accctcaagg ccaaaaggcc agggctgcgc ctccccgact ccaacattga ctaccccatg 1260
gccacgggtg atggcgccaa gaccctggcc atccacgtga aggccctgac ggcagactcc 1320
atccgcatca cgtggaaggc cacgctcccc gcctcctctt tccggctcag ttggctgcgc 1380
ctgggccaca gcccagccgt gggctccatc acggagacct tggtgcaggg ggacaagaca 1440
gagtacctgc tgacagccct ggagcccaag tccacctaca tcatctgcat ggtcaccatg 1500
gagaccagca atgcctacgt agctgatgag acacccgtgt gtgccaaggc agagacagcc 1560
gacagctatg gccctaccac cacactcaac caggagcaga acgctggccc catggcgagc 1620
ctgcccctgg cgggcatcat cggcggggca gtggctctgg tcttcctctt cctggtcctg 1680
ggggccatct gctggtacgt gcaccaggct ggcgagctgc tgacccggga gagggcctac 1740
aaccggggca gcaggaaaaa ggatgactat atggagtcag ggaccaagaa ggataactcc 1800
atcctggaaa tccgcggccc tgggctgcag atgctgccca tcaacccgta ccgcgccaaa 1860
gaagagtacg tggtccacac tatcttcccc tccaacggca gcagcctctg caaggccaca 1920
cacaccattg gctacggcac cacgcggggc taccgggacg gcggcatccc cgacatagac 1980
tactcctaca ca                                                      1992
```

<210> 68
<211> 664
<212> PRT
<213> Homo sapiens

<400> 68

```
Met Val Val Ala His Pro Thr Ala Thr Ala Thr Thr Thr Pro Thr Ala
  1               5                  10                  15

Thr Val Thr Ala Thr Val Val Met Thr Thr Ala Thr Met Asp Leu Arg
             20                  25                  30

Asp Trp Leu Phe Leu Cys Tyr Gly Leu Ile Ala Phe Leu Thr Glu Val
         35                  40                  45

Ile Asp Ser Thr Thr Cys Pro Ser Val Cys Arg Cys Asp Asn Gly Phe
     50                  55                  60

Ile Tyr Cys Asn Asp Arg Gly Leu Thr Ser Ile Pro Ala Asp Ile Pro
 65                  70                  75                  80

Asp Asp Ala Thr Thr Leu Tyr Leu Gln Asn Asn Gln Ile Asn Asn Ala
                 85                  90                  95

Gly Ile Pro Gln Asp Leu Lys Thr Lys Val Asn Val Gln Val Ile Tyr
            100                 105                 110

Leu Tyr Glu Asn Asp Leu Asp Glu Phe Pro Ile Asn Leu Pro Arg Ser
        115                 120                 125
```

```
Leu Arg Glu Leu His Leu Gln Asp Asn Asn Val Arg Thr Ile Ala Arg
    130                 135                 140

Asp Ser Leu Ala Arg Ile Pro Leu Leu Glu Lys Leu His Leu Asp Asp
145                 150                 155                 160

Asn Ser Val Ser Thr Val Ser Ile Glu Glu Asp Ala Phe Ala Asp Ser
                165                 170                 175

Lys Gln Leu Lys Leu Leu Phe Leu Ser Arg Asn His Leu Ser Ser Ile
            180                 185                 190

Pro Ser Gly Leu Pro His Thr Leu Glu Glu Leu Arg Leu Asp Asp Asn
        195                 200                 205

Arg Ile Ser Thr Ile Pro Leu His Ala Phe Lys Gly Leu Asn Ser Leu
    210                 215                 220

Arg Arg Leu Val Leu Asp Gly Asn Leu Leu Ala Asn Gln Arg Ile Ala
225                 230                 235                 240

Asp Asp Thr Phe Ser Arg Leu Gln Asn Leu Thr Glu Leu Ser Leu Val
                245                 250                 255

Arg Asn Ser Leu Ala Ala Pro Pro Leu Tyr Leu Gln Asp Asn Ala Ile
            260                 265                 270

Ser His Ile Pro Tyr Asn Thr Leu Ala Lys Met Arg Glu Leu Glu Arg
        275                 280                 285

Leu Asp Leu Ser Asn Asn Asn Leu Thr Thr Leu Pro Arg Gly Leu Phe
    290                 295                 300

Asp Asp Leu Gly Asn Leu Ala Gln Leu Leu Leu Arg Asn Asn Pro Trp
305                 310                 315                 320

Phe Cys Gly Cys Asn Leu Met Trp Leu Arg Asp Trp Val Lys Ala Arg
                325                 330                 335

Ala Ala Val Val Asn Val Arg Gly Leu Met Cys Gln Gly Pro Glu Lys
            340                 345                 350

Val Arg Gly Met Ala Ile Lys Asp Ile Thr Ser Glu Val Glu Ser Val
        355                 360                 365

Leu Arg Arg Ala Pro Gln Gly Gly Val Ala Asn Ala Ala Ala Lys Thr
    370                 375                 380

Thr Ala Ser Asn His Ala Ser Ala Thr Thr Pro Gln Gly Ser Leu Phe
385                 390                 395                 400

Thr Leu Lys Ala Lys Arg Pro Gly Leu Arg Leu Pro Asp Ser Asn Ile
                405                 410                 415

Asp Tyr Pro Met Ala Thr Gly Asp Gly Ala Lys Thr Leu Ala Ile His
            420                 425                 430
```

```
Val Lys Ala Leu Thr Ala Asp Ser Ile Arg Ile Thr Trp Lys Ala Thr
        435                 440                 445

Leu Pro Ala Ser Ser Phe Arg Leu Ser Trp Leu Arg Leu Gly His Ser
    450                 455                 460

Pro Ala Val Gly Ser Ile Thr Glu Thr Leu Val Gln Gly Asp Lys Thr
465                 470                 475                 480

Glu Tyr Leu Leu Thr Ala Leu Glu Pro Lys Ser Thr Tyr Ile Ile Cys
                485                 490                 495

Met Val Thr Met Glu Thr Ser Asn Ala Tyr Val Ala Asp Glu Thr Pro
            500                 505                 510

Val Cys Ala Lys Ala Glu Thr Ala Asp Ser Tyr Gly Pro Thr Thr Thr
        515                 520                 525

Leu Asn Gln Glu Gln Asn Ala Gly Pro Met Ala Ser Leu Pro Leu Ala
    530                 535                 540

Gly Ile Ile Gly Gly Ala Val Ala Leu Val Phe Leu Phe Leu Val Leu
545                 550                 555                 560

Gly Ala Ile Cys Trp Tyr Val His Gln Ala Gly Glu Leu Leu Thr Arg
                565                 570                 575

Glu Arg Ala Tyr Asn Arg Gly Ser Arg Lys Lys Asp Asp Tyr Met Glu
            580                 585                 590

Ser Gly Thr Lys Lys Asp Asn Ser Ile Leu Glu Ile Arg Gly Pro Gly
        595                 600                 605

Leu Gln Met Leu Pro Ile Asn Pro Tyr Arg Ala Lys Glu Glu Tyr Val
    610                 615                 620

Val His Thr Ile Phe Pro Ser Asn Gly Ser Ser Leu Cys Lys Ala Thr
625                 630                 635                 640

His Thr Ile Gly Tyr Gly Thr Thr Arg Gly Tyr Arg Asp Gly Gly Ile
                645                 650                 655

Pro Asp Ile Asp Tyr Ser Tyr Thr
            660
```

<210> 69
<211> 26
<212> DNA
<213> Homo sapiens

<400> 69
caacgtgcag gtcatctacc tatacg 26

<210> 70
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:oligonucleotide
primer

<400> 70
gcccgtctca aaacactctc catct 25

<210> 71
<211> 54
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:oligonucleotide
primer

<400> 71
Asn Pro Phe Asn Cys Asp Cys Glu Leu Arg Trp Leu Leu Arg Trp Leu
1 5 10 15

Arg Glu Thr Asn Pro Arg Arg Leu Glu Asp Gln Glu Asp Leu Arg Cys
20 25 30

Ala Ser Pro Glu Ser Leu Arg Gly Gln Pro Leu Leu Glu Leu Leu Pro
35 40 45

Ser Asp Phe Ser Cys Pro
50

<210> 72
<211> 84
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:consensus
sequence

<400> 72
Pro Ser Ala Pro Thr Asn Leu Thr Val Thr Asp Val Thr Ser Thr Ser
1 5 10 15

Leu Thr Leu Ser Trp Ser Pro Pro Thr Gly Asn Gly Pro Ile Thr Gly
20 25 30

Tyr Glu Val Thr Tyr Arg Gln Pro Lys Asn Gly Gly Glu Trp Asn Glu
35 40 45

Leu Thr Val Pro Gly Thr Thr Thr Ser Tyr Thr Leu Thr Gly Leu Lys
50 55 60

Pro Gly Thr Glu Tyr Glu Val Arg Val Gln Ala Val Asn Gly Gly Gly

65 70 75 80

Gly Pro Glu Ser

<210> 73
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:consensus sequence

<400> 73
Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15

Gly Leu Phe Ser Asn Leu Pro
20

<210> 74
<211> 949
<212> PRT
<213> Homo sapiens

<400> 74
Ala Thr Gly Gly Thr Gly Gly Thr Gly Gly Cys Ala Cys Ala Cys Cys
1 5 10 15

Cys Cys Ala Cys Cys Gly Cys Cys Ala Cys Thr Gly Cys Cys Ala Cys
20 25 30

Cys Ala Cys Cys Ala Cys Gly Cys Cys Cys Ala Cys Thr Gly Cys Cys
35 40 45

Ala Cys Thr Gly Thr Cys Ala Cys Gly Gly Cys Cys Ala Cys Cys Gly
50 55 60

Thr Thr Gly Thr Gly Ala Thr Gly Ala Cys Cys Ala Cys Gly Gly Cys
65 70 75 80

Cys Ala Cys Cys Ala Thr Gly Gly Ala Cys Cys Thr Gly Cys Gly Gly
85 90 95

Gly Ala Cys Thr Gly Gly Cys Thr Gly Thr Thr Cys Cys Thr Cys Thr
100 105 110

Gly Cys Thr Ala Cys Gly Gly Gly Cys Thr Cys Ala Thr Cys Gly Cys
115 120 125

Cys Thr Thr Cys Cys Thr Gly Ala Cys Gly Gly Ala Gly Gly Thr Cys
130 135 140

Ala Thr Cys Gly Ala Cys Ala Gly Cys Ala Cys Cys Ala Cys Cys Thr

```
145                 150                 155                 160

Gly Cys Cys Cys Cys Thr Cys Gly Gly Thr Gly Thr Gly Cys Cys Gly
                165                 170                 175

Cys Thr Gly Cys Gly Ala Cys Ala Ala Cys Gly Gly Cys Thr Thr Cys
            180                 185                 190

Ala Thr Cys Thr Ala Cys Thr Gly Cys Ala Ala Cys Gly Ala Cys Cys
        195                 200                 205

Gly Gly Gly Gly Ala Cys Thr Cys Ala Cys Ala Thr Cys Cys Ala Thr
    210                 215                 220

Cys Cys Cys Cys Gly Cys Ala Gly Ala Thr Ala Thr Cys Cys Cys Thr
225                 230                 235                 240

Gly Ala Thr Gly Ala Cys Gly Cys Cys Ala Cys Cys Ala Cys Cys Cys
                245                 250                 255

Thr Cys Thr Ala Thr Cys Thr Gly Cys Ala Gly Ala Ala Cys Ala Ala
            260                 265                 270

Cys Cys Ala Gly Ala Thr Cys Ala Ala Cys Ala Ala Cys Gly Cys Thr
        275                 280                 285

Gly Gly Cys Ala Thr Cys Cys Cys Cys Cys Ala Gly Gly Ala Cys Cys
    290                 295                 300

Thr Cys Ala Ala Gly Ala Cys Cys Ala Ala Gly Gly Thr Cys Ala Ala
305                 310                 315                 320

Cys Gly Thr Gly Cys Ala Gly Gly Thr Cys Ala Thr Cys Thr Ala Cys
                325                 330                 335

Cys Thr Ala Thr Ala Cys Gly Ala Gly Ala Ala Thr Gly Ala Cys Cys
            340                 345                 350

Thr Gly Gly Ala Thr Gly Ala Gly Thr Thr Cys Cys Cys Cys Ala Thr
        355                 360                 365

Cys Ala Ala Cys Cys Thr Gly Cys Cys Cys Cys Gly Cys Thr Cys Cys
    370                 375                 380

Cys Thr Cys Cys Gly Gly Gly Ala Gly Cys Thr Gly Cys Ala Cys Cys
385                 390                 395                 400

Thr Gly Cys Ala Gly Gly Ala Cys Ala Ala Cys Ala Ala Thr Gly Thr
                405                 410                 415

Gly Cys Gly Cys Ala Cys Cys Ala Thr Thr Gly Cys Cys Ala Gly Gly
            420                 425                 430

Gly Ala Cys Thr Cys Gly Cys Thr Gly Gly Cys Cys Cys Gly Cys Ala
        435                 440                 445

Thr Cys Cys Cys Gly Cys Thr Gly Cys Thr Gly Gly Ala Gly Ala Ala
```

```
    450                 455                 460

Gly Cys Thr Gly Cys Ala Cys Cys Thr Gly Gly Ala Thr Gly Ala Cys
465                 470                 475                 480

Ala Ala Cys Thr Cys Cys Gly Thr Gly Thr Cys Cys Ala Cys Cys Gly
                485                 490                 495

Thr Cys Ala Gly Cys Ala Thr Thr Gly Ala Gly Gly Ala Gly Gly Ala
            500                 505                 510

Cys Gly Cys Cys Thr Thr Cys Gly Cys Cys Gly Ala Cys Ala Gly Cys
        515                 520                 525

Ala Ala Ala Cys Ala Gly Cys Thr Cys Ala Ala Gly Cys Thr Gly Cys
    530                 535                 540

Thr Cys Thr Thr Cys Cys Thr Gly Ala Gly Cys Cys Gly Gly Ala Ala
545                 550                 555                 560

Cys Cys Ala Cys Cys Thr Gly Ala Gly Cys Ala Gly Cys Ala Thr Cys
                565                 570                 575

Cys Cys Cys Thr Cys Gly Gly Gly Gly Cys Thr Gly Cys Cys Gly Cys
            580                 585                 590

Ala Cys Ala Cys Gly Cys Thr Gly Gly Ala Gly Gly Ala Gly Cys Thr
        595                 600                 605

Gly Cys Gly Gly Cys Thr Gly Gly Ala Thr Gly Ala Cys Ala Ala Cys
    610                 615                 620

Cys Gly Cys Ala Thr Cys Thr Cys Cys Ala Cys Cys Ala Thr Cys Cys
625                 630                 635                 640

Cys Gly Cys Thr Gly Cys Ala Thr Gly Cys Cys Thr Thr Cys Ala Ala
                645                 650                 655

Gly Gly Gly Cys Cys Thr Cys Ala Ala Cys Ala Gly Cys Cys Thr Gly
            660                 665                 670

Cys Gly Gly Cys Gly Cys Cys Thr Gly Gly Thr Gly Cys Thr Gly Gly
        675                 680                 685

Ala Cys Gly Gly Thr Ala Ala Cys Cys Thr Gly Cys Thr Gly Gly Cys
    690                 695                 700

Cys Ala Ala Cys Cys Ala Gly Cys Gly Cys Ala Thr Cys Gly Cys Cys
705                 710                 715                 720

Gly Ala Cys Gly Ala Cys Ala Cys Cys Thr Thr Cys Ala Gly Cys Cys
                725                 730                 735

Gly Cys Cys Thr Ala Cys Ala Gly Ala Ala Cys Cys Thr Cys Ala Cys
            740                 745                 750

Ala Gly Ala Gly Cys Thr Cys Thr Cys Gly Cys Thr Gly Gly Thr Gly
```

```
        755                 760                 765

Cys Gly Cys Ala Ala Thr Thr Cys Gly Cys Thr Gly Gly Cys Cys Gly
    770                 775                 780

Cys Gly Cys Cys Ala Cys Cys Cys Cys Thr Cys Ala Ala Cys Cys Thr
785                 790                 795                 800

Gly Cys Cys Cys Ala Gly Cys Gly Cys Cys Cys Ala Cys Cys Thr Gly
                805                 810                 815

Cys Ala Gly Ala Ala Ala Cys Thr Cys Thr Ala Cys Cys Thr Gly Cys
            820                 825                 830

Ala Gly Gly Ala Cys Ala Ala Thr Gly Cys Cys Ala Thr Cys Ala Gly
        835                 840                 845

Cys Cys Ala Cys Ala Thr Cys Cys Cys Cys Thr Ala Cys Ala Ala Cys
    850                 855                 860

Ala Cys Gly Cys Thr Gly Gly Cys Cys Ala Ala Gly Ala Thr Gly Cys
865                 870                 875                 880

Gly Thr Gly Ala Gly Cys Thr Gly Gly Ala Gly Cys Gly Gly Cys Thr
                885                 890                 895

Gly Gly Ala Cys Cys Thr Gly Thr Cys Cys Ala Ala Cys Ala Ala Cys
            900                 905                 910

Ala Ala Cys Cys Thr Gly Ala Cys Cys Ala Cys Gly Cys Thr Gly Cys
        915                 920                 925

Cys Cys Cys Gly Cys Gly Gly Cys Cys Thr Gly Thr Thr Cys Gly Ala
    930                 935                 940

Cys Gly Ala Cys Cys
945
```

<210> 75
<211> 674
<212> PRT
<213> Homo sapiens

<400> 75

```
Met Val Val Ala His Pro Thr Ala Thr Ala Thr Thr Thr Pro Thr Ala
  1               5                  10                  15

Thr Val Thr Ala Thr Val Val Met Thr Thr Ala Thr Met Asp Leu Arg
             20                  25                  30

Asp Trp Leu Phe Leu Cys Tyr Gly Leu Ile Ala Phe Leu Thr Glu Val
         35                  40                  45

Ile Asp Ser Thr Thr Cys Pro Ser Val Cys Arg Cys Asp Asn Gly Phe
     50                  55                  60
```

```
Ile Tyr Cys Asn Asp Arg Gly Leu Thr Ser Ile Pro Ala Asp Ile Pro
 65                  70                  75                  80

Asp Asp Ala Thr Thr Leu Tyr Leu Gln Asn Asn Gln Ile Asn Asn Ala
                 85                  90                  95

Gly Ile Pro Gln Asp Leu Lys Thr Lys Val Asn Val Gln Val Ile Tyr
            100                 105                 110

Leu Tyr Glu Asn Asp Leu Asp Glu Phe Pro Ile Asn Leu Pro Arg Ser
        115                 120                 125

Leu Arg Glu Leu His Leu Gln Asp Asn Asn Val Arg Thr Ile Ala Arg
    130                 135                 140

Asp Ser Leu Ala Arg Ile Pro Leu Leu Glu Lys Leu His Leu Asp Asp
145                 150                 155                 160

Asn Ser Val Ser Thr Val Ser Ile Glu Glu Asp Ala Phe Ala Asp Ser
                165                 170                 175

Lys Gln Leu Lys Leu Leu Phe Leu Ser Arg Asn His Leu Ser Ser Ile
            180                 185                 190

Pro Ser Gly Leu Pro His Thr Leu Glu Glu Leu Arg Leu Asp Asp Asn
        195                 200                 205

Arg Ile Ser Thr Ile Pro Leu His Ala Phe Lys Gly Leu Asn Ser Leu
    210                 215                 220

Arg Arg Leu Val Leu Asp Gly Asn Leu Leu Ala Asn Gln Arg Ile Ala
225                 230                 235                 240

Asp Asp Thr Phe Ser Arg Leu Gln Asn Leu Thr Glu Leu Ser Leu Val
                245                 250                 255

Arg Asn Ser Leu Ala Ala Pro Pro Leu Asn Leu Pro Ser Ala His Leu
            260                 265                 270

Gln Lys Leu Tyr Leu Gln Asp Asn Ala Ile Ser His Ile Pro Tyr Asn
        275                 280                 285

Thr Leu Ala Lys Met Arg Glu Leu Glu Arg Leu Asp Leu Ser Asn Asn
    290                 295                 300

Asn Leu Thr Thr Leu Pro Arg Gly Leu Phe Asp Asp Leu Gly Asn Leu
305                 310                 315                 320

Ala Gln Leu Leu Leu Arg Asn Asn Pro Trp Phe Cys Gly Cys Asn Leu
                325                 330                 335

Met Trp Leu Arg Asp Trp Val Lys Ala Arg Ala Ala Val Val Asn Val
            340                 345                 350

Arg Gly Leu Met Cys Gln Gly Pro Glu Lys Val Arg Gly Met Ala Ile
        355                 360                 365
```

```
Lys Asp Ile Thr Ser Glu Met Asp Glu Cys Phe Glu Thr Gly Pro Gln
    370                 375                 380

Gly Gly Val Ala Asn Ala Ala Ala Lys Thr Thr Ala Ser Asn His Ala
385                 390                 395                 400

Ser Ala Thr Thr Pro Gln Gly Ser Leu Phe Thr Leu Lys Ala Lys Arg
                405                 410                 415

Pro Gly Leu Arg Leu Pro Asp Ser Asn Ile Asp Tyr Pro Met Ala Thr
            420                 425                 430

Gly Asp Gly Ala Lys Thr Leu Ala Ile His Val Lys Ala Leu Thr Ala
        435                 440                 445

Asp Ser Ile Arg Ile Thr Trp Lys Ala Thr Leu Pro Ala Ser Ser Phe
    450                 455                 460

Arg Leu Ser Trp Leu Arg Leu Gly His Ser Pro Ala Val Gly Ser Ile
465                 470                 475                 480

Thr Glu Thr Leu Val Gln Gly Asp Lys Thr Glu Tyr Leu Leu Thr Ala
                485                 490                 495

Leu Glu Pro Lys Ser Thr Tyr Ile Ile Cys Met Val Thr Met Glu Thr
            500                 505                 510

Ser Asn Ala Tyr Val Ala Asp Glu Thr Pro Val Cys Ala Lys Ala Glu
        515                 520                 525

Thr Ala Asp Ser Tyr Gly Pro Thr Thr Thr Leu Asn Gln Glu Gln Asn
    530                 535                 540

Ala Gly Pro Met Ala Ser Leu Pro Leu Ala Gly Ile Ile Gly Gly Ala
545                 550                 555                 560

Val Ala Leu Val Phe Leu Phe Leu Val Leu Gly Ala Ile Cys Trp Tyr
                565                 570                 575

Val His Gln Ala Gly Glu Leu Leu Thr Arg Glu Arg Ala Tyr Asn Arg
            580                 585                 590

Gly Ser Arg Glu Lys Asp Asp Tyr Met Glu Ser Gly Thr Lys Lys Asp
        595                 600                 605

Asn Ser Ile Leu Glu Ile Arg Gly Pro Gly Leu Gln Met Leu Pro Ile
    610                 615                 620

Asn Pro Tyr Arg Ala Lys Glu Glu Tyr Val Val His Thr Ile Phe Pro
625                 630                 635                 640

Ser Asn Gly Ser Ser Leu Cys Lys Ala Thr His Thr Ile Gly Tyr Gly
                645                 650                 655

Thr Thr Arg Gly Tyr Arg Asp Gly Gly Ile Pro Asp Ile Asp Tyr Ser
            660                 665                 670
```

Tyr Thr

<210> 76
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:consensus sequence

<400> 76
Ala Cys Pro Arg Glu Cys Thr Cys Ser Pro Phe Gly Leu Val Val Asp
1 5 10 15

Cys Ser Gly Arg Gly Leu Thr Leu Glu Val Pro Arg Asp Leu Pro
20 25 30

<210> 77
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:consensus sequence

<400> 77
Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15

Gly Leu Phe Ser Asn Leu Pro
20

<210> 78
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:consensus sequence

<400> 78
Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15

Gly Leu Phe Ser Asn Leu Pro
20

<210> 79
<211> 23

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:consensus
sequence

<400> 79
Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15

Gly Leu Phe Ser Asn Leu Pro
20

<210> 80
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:consensus
sequence

<400> 80
Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15

Gly Leu Phe Ser Asn Leu Pro
20

<210> 81
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:consensus
sequence

<400> 81
Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15

Gly Leu Phe Ser Asn Leu Pro
20

<210> 82
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:consensus
sequence

<400> 82
Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15

Gly Leu Phe Ser Asn Leu Pro
20

<210> 83
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:consensus sequence

<400> 83
Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15

Gly Leu Phe Ser Asn Leu Pro
20

<210> 84
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:consensus sequence

<400> 84
Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15

Gly Leu Phe Ser Asn Leu Pro
20